A Trip to Cuba and the Southern States, No. 4.

"Another Flora here, of bolder hues
And richer sweets."

CONTINUING our notes as they present themselves for extract, the reader will find them to partake of the rambling character of our visit, during which, every opportunity which health permitted, was employed in examining the novelties presented in every direction. We could but think that Europe has become somewhat stale to travellers who have frequently seen it. Like a dutiful son, the American's first visits have been paid to the ancestral roofs; that accomplished, and all which could be taught him there having been scanned, he may now turn his wings to another point of the compass, and converse with the land of the sun, so long in the exclusive possession of the unappreciative Spaniard.

Mrs. Almy's Hotel (where Dr. Kane expired) forms one of the illustrations of this number. The windows are grated with iron, and having no glass whatever, and only a curtain, they are protected from the entrance of robbers in this manner. Nearly all the houses are thus secured, and the rooms may be left without fastening. Being mostly of one story, air is thus freely admitted during the night to the sleepers.

In the picture, the street scene represents the volante, erroneous in two particulars: the shafts are quite too short, and the central young lady usually sits the most forward of the party when three ride together, which is usual. The horse is rarely so fat as represented, but the figure of the calisero is excellent; his hat, perfect; even the best dressed liveried coachman! has his legs, as high up as above the knee, encased in jack-boots, and the heel is ornamented with a silver spur; he exhibits at the junction of the shoe and the boot leg, very much what would look at a distance like a silk stocking, but is really black skin. The most fashionable drive two horses to the volante, when the calisero rides the second outside the shaft, and this horse is fastened near the step; he is only for ornament, and for the postilion to display himself on, with his awkward jog-trot. Mrs. Almy's was on the bay, and Wolcott's (a two-storied house) on the opposite corner. Both could be known in the dark by the number of orange-skins thrown out by eager American boarders. The door at the corner was the entrance to a cigar shop; the wall at the opposite end was the inclosure of the miserable, small, old opera-house, unroofed by a hurricane, and superseded by the more superb Tacon Theatre outside the walls.

The names of streets are sometimes significant and striking to strangers; this house is at the corner of the Street of Light, Caillé de Lutz, and the official street, Caillé des Officios, in which the Post-Office and Custom House are, and appear to have been immemorially. Other streets are Caillé del Sol (Street of the Sun), de la Habana, Havana Street, &c.

Sugar, &c.—The high price of sugar has had much to do with the present state of prosperity, as it is called, which induces extravagance and absurd luxury, evidenced by such things as the sale of fans ornamented with original paintings and jewels, at six and seven hundred dollars each. We were assured that half a million of dollars had been made, the past season, by some extensive sugar growers, and that those who made sixty and seventy thousand could be counted by hundreds. The whole profits of the island, this year, from sugar, were estimated by

those who ought to be able to form a judgment, at fifteen millions of our money. It was a season of drought, but the high prices, and increased saccharine matter in the smaller canes, had much more than made up for the deficiency. The Cuban planters have this advantage over those of Louisiana, that the cane-roots survive from year to year. In our country, planting is necessary every season; this is expensive, and the young plant sometimes "catches a cold," as a Cuban termed it when descanting on this fact.

The attention of most visitors is much given to the processes of making sugar, in which vast improvements and economy have latterly been introduced. The ear becomes soon familiar with the words representing new air-tight condensers, and with the names of the most celebrated estates, in which the Brothers Arietta make a prominent figure, their estates being understood to present the best culture and the best boiling, &c., no less than the most successful employment of the Chinese workmen. A very handsome folio volume has lately been published in Havana, descriptive of the best sugar estates; the plates (if we remember, there are fifty-four, well lithographed and colored) are sold together or separately, so that each visitor can bring away characteristic scenes. The whole cost of the book exceeds fifty dollars; it was purchased by one of the party, for deposit, probably, in one of our best public libraries. It is of course in Spanish.

Logwood is a product of the island, and the tree is used for hedges, the trimmings being more or less employed for domestic dyes. Food from the roots of the Yucca and other productions, is prepared on the plantations, but the banana and plantain have superseded the use of the Bread fruit, which was at one period extensively introduced, and is now found growing in gardens, but its product not greatly esteemed or employed.

In many private gardens, it is usual to see the large citron growing rampantly, bent over arbors, and the fruit hanging down, of an enormous size. We were allowed to pick one that weighed four pounds and six ounces, and this was by no means the largest. Limes, lemons, and, in short, all the tribe, grow with wonderful rapidity, and come into bearing very young; but there is little commercial demand for the fruit, and it is sparsely cultivated. But what glorious effects might be produced by the possession of such ornamental trees and shrubs, in connection with Euphorbias, the Cactus, and a thousand things we value so highly! As to attempts at ornament in this way, they are the exception, and more rare than is credible. You may see more Camellias in a small northern greenhouse at home, than will greet your eye during your whole visit to Cuba, where they would grow to a great size, and need no more care than anything else; but there it is so much more easily procured, that what we esteem so highly, is here neglected.

The best fruits of the country find a good market at the conserve factories, the most resorted to being Dominica's, the proprietor of the fashionable ice cream, or, rather, ice *water* shop. He is extensively in the business, and his wares are so toothsome and excellent, that it is a universal thing for American visitors to invest from a hundred dollars, downwards, in the guava and other jellies and conserves, dried and candied fruit, &c.; these, and domestic manufactures of the same kind, are also much consumed by the Islanders, who seem to live upon fruit, conserves, and vegetables. Dominica's restaurant is more crowded than any we have ever seen.

Commercial Gardens.—There are very few of these; we could hear of but two, one kept by a Frenchman, on the Paséo, who has but little to show, the owner being in poor health. Pedrigal's, however, exhibits a good appearance; the proprietor speaks Spanish only, and he knows only the Spanish names for his plants. This difficulty meets you everywhere, and all being new, the information

you can pick up may be said to be the "pursuit of knowledge under difficulties." Here we found a number of beautiful plants unknown to our green or hothouses, many of which, with a whole cargo of air-plants, were preparing to be, and have since been, shipped to our townsman, James Dundas, Esq., under direction of his enthusiastic relative, Mr. J. Lippincott, Jr., who intelligently explored chapparals, climbed mountains, and underwent every kind of fatigue, and sometimes native opposition, to fill Mr. Dundas's noble houses with the best things that could be procured.

Among them is one plant that will be new to a vast portion of our cultivators. Mr. Pedrigal calls it *Camellia arborea*, and it is about the size of a healthy young Camellia of three years' growth; its peculiarity is, that when set above a stream of water, at a height, as we saw it, of eight or ten feet, it sends down to the water a tube, round and elastic, looking as if made of thread or soft leather; at the end of this are a few little roots, and through these nourishment is sucked, and sent *in the hose!* to the plant.*

Mr. Pedrigal supplies a vast many native plants to European gardens, and to this end, propagates and collects the best air-plants and epiphytes. Every small and large tree in his garden, is the bearer of numerous specimens, so that the place has quite an air-plant air, quite novel and amusing. On a Mamon-tree will be seen air-plants bearing the flowers resembling a monkey, a spider, and a butterfly, proceeding apparently from the same roots which have been grown together from the same starting-point. His verbenas attain the height of six feet! and have concluded to become ascending runners, in compliment to the climate. Then there are trees covered with such novel flowers and fruit, of which we had no previous knowledge, that a year instead of a few days would be required to give them reality to our readers. We must, however, name, in Spanish fashion, the *Pinōn real* (of which we obtained a fine drawing for publication in our last number) and La Carolina (of the Bombaceæ family), two of the most gorgeous things imaginable. A running vine here attracted all eyes. In Spanish, it is the *Flore de Cinco meses* (five months flower), most superb and novel; but all our specimens were taken from under pressure of a trunk by a wicked Spanish chamber-maid, and thrown into her slop-bucket! which will account for our want of success in naming many articles that were highly interesting and novel.

Mr. Pedrigal has some fine specimens of Araucaria Braziliensis, and sells at reasonable prices. Mr. Lippincott very much reduced his varied stock, and we are happy to know they have all arrived in Philadelphia in excellent condition.

We saw at this garden one of the most valuable woods known to the world: the Hibiscus tiliaceæ, a Malvaceæ; its fibre is used extensively for making ropes, and its wood is of that durable and elastic quality which gives the long and very strong and elastic shaft-poles of the volante, and which is indispensable, in the absence of hickory, to the manufacture of that universal vehicle.

Roses are about as good as our own; great attention is now being paid to this long-neglected flower, which it was thought would not succeed here; but the Paradise and Persia of roses is in the vicinity of Natches, which we shall attempt to describe hereafter.

* This proves, on nearer examination, to be one of the Clusias, the *rosea* or syphon plant, mentioned as enveloping the trees and palms, and named in Mr. Sauvalle's letter in our last number along with Clusia alba. The species are trees abounding in a tenacious glutinous juice, of a balsamic flavor, whence the English name Balsam tree. C. rosea has handsome flowers; the fruit is green and of the size of a middling apple, with eight lines running like the meridians of a globe from the stalk to the crown of it. When it ripens it opens at these lines, and divides into eight parts, disclosing many mucilaginous scarlet seeds, resembling those of the pomegranate. See the former description of the alba.

While on the subject of gardens, we must not omit that of one of our friends, N. J. Gomez, Esq., on the Cerro Road, near the town. Mr. Gomez is an enthusiastic horticulturist, and is likely to do much where so much is wanted to introduce a taste for the best kinds of fruit; he works alone, but with knowledge. At his premises, we had the pleasure of tasting the cherimoyer, the apple banana, and various others, and of feasting our eyes on roses and "queer things" in the way of vegetation, so numerous that we were quite discouraged, and put by our pencil in despair! What a pity the island has no *Horticulturist*, nor a single print that gives any attention to the topic.

The Banana and Plantain.—Indifferent observers will scarcely detect a difference between the banana and plantain, except in the fruit, and here the likeness is great; but the plantain bears a longer fruit, somewhat differently shaped. This splendid and valuable genus, *Musa*, consists of species which have perennial, roundish, solid, watery bulbs, with biennial, and sometimes longer enduring stems. The stems are straight, erect, varying from five to twenty-five feet in height, simple, thick, round, smooth, fungous, watery, and lamellated. The leaves are oblong, and, till split with the winds, entire, from three to ten feet in length, and under two feet in width. The flowers are in large terminating racemes, without a calyx or perianthium, generally whitish, the fertile flowers occupying the lower, and the barren the upper part of the raceme. They are cultivated in great perfection by Mr. Dundas in his noble palm-house in Philadelphia, and succeed tolerably well in sheltered situations in New Orleans.

In the plant most cultivated in the West Indies and Cuba, the herbaceous stalk is fifteen or twenty feet high, with leaves often more than six feet long, and two broad. When the fruit is cut, the stalk is also destroyed, and new sprouts soon appear, one or two only being allowed to grow, and thus a continuous supply is afforded. The skin of the fruit is tough, and within is a soft pulp, of a luscious, sweet flavor that it is very easy to become fond of. The spikes of fruit are often so large as to weigh upwards of forty pounds. Gerarde, and other old authors, name it Adam's Apple, from a notion that it was the forbidden fruit of Eden; whilst others supposed it to be the grapes brought out of the promised land by the spies of Moses. It is certainly one of the most useful fruits in the world, and seems to have migrated with mankind into all the climates in which it can be cultivated; some or other of the plants are bearing most parts of the year, and their fruit is often the whole food of a family. The plantain is roasted, boiled, and fried, when just full grown; it is also eaten boiled with salt meat or fish, and, when ripe, it is made into tarts, or dried as a sweetmeat. A fermented liquor is made from them, and, in some places, a cloth from the fibres of the trunk; the leaves make excellent mats, or serve for stuffing mattresses. Its value may be judged of by the fact that three dozen plantains are sufficient to serve one man for a week instead of bread, and will support him much longer.

Mr. Sauvalle, the botanist of the island, assured us that in the banana would be found the long sought substitute for rags in paper making, and we have but little doubt respecting this. The amount of fibre contained in the stalk is very great—certainly not less than forty per cent.—and this is easily reduced to pulp. So confident is Mr. S. respecting this (and his opinion will have great weight with all who know him), that he would be willing to enter into arrangements with a practical paper-maker to establish the manufacture, for which the greatest abundance of material, now wasted or thrown away, could be had. From Mr. Sauvalle's position and wealth, this is a feasible project. He does not doubt that the premium offered, in London, of a thousand pounds sterling, for a substitute for the materials at present so scarce, could be obtained after a fair experiment.

John Chinaman.—On the first information received in this country that *Coolies* were imported into Cuba under an apprenticeship contract, a very erroneous impression was created here respecting their treatment. A few of the first cargoes, it was true, suffered from ill-usage; the planters did not understand the character of the new people they had obtained, and they treated them harshly. The Chinaman parts with life, under such circumstances, with a *nonchalance* unknown to the African, and considers that he is doing his master a great injury if he destroys himself while in his employ; a number who were treated to the lash thus perished, and an impression got footing in this country that is not warranted by subsequent experience. It is ascertained that, though the contract they make in China, to be returned, free of cost, at the expiration of their servitude of eight years, is binding on the shipper, remarkably few instances have occurred of their making this demand. They find profitable employment immediately on the conclusion of the contract, and are altogether in a better condition than at home, as respects food and competence. Most of them can read and write, and have a trade, such as shoemaking, black and tinsmiths, conserve-makers, &c.; some are at once employed in these arts; others go to the sugar depots; a large number hire themselves as domestic servants, and we saw many in positions of trust on the railroads, &c. They are much esteemed in private families, make capital waiters, and are trusted where the negro shows little or no capacity for head-work.

The contract in the Chinese port is to land them in Cuba, and place them in service for eight years, with the privilege of a return passage, for which bond is given to the authorities. In addition to maintenance, sick or well, the employer pays them four dollars a month till their term is over, at which time they readily obtain from fifteen to seventeen dollars, and soon begin to accumulate an independence. The price obtained by the importer, at first, was three hundred dollars for each well-conditioned man, but this sum has advanced from thirty to fifty per cent., leaving a large profit to the merchant; so that greater numbers are arriving and expected. They bring no women with them; it was thought, however, their accumulations of money would be used to send for their wives and families. In Havana, a few persons purchase the time of the newly imported men, and hire them out in families at a profit. We found, at various tables, the Chinaman behind our chair very attentive, cleanly, and polite. In our hotel, a young fellow some time in Cuba, was the best waiter on hand; he attached himself to one of the party, and seemed quite willing to accompany him to Philadelphia, but his last question decided him not to come: "Was there any Chinese for him to associate with?" The "None" was the discouragement.

You see "John" all over Havana, and we were told he was in the thick of the gambling at the bull-fights and cock-pits. What effect is to be produced by this influx of a new race, would puzzle that wiseacre, the political economist, who can best predict the result after it is known; he was greatly at fault as to the rate of interest money would command when gold was so plentiful as to be turned up by every industrious spade, and he must wait a while to solve this new Chinese problem.

This mode of importing Chinamen differs very little from the one long employed in this country with what we called "Redemptioners" from Germany in years gone by, when ship loads were regularly sold, and a black man in our employ bought a white wife from the captain of a ship in the Delaware; but it differs in the character of the race. The "Redemptioner" soon amalgamated with the people, and his descendants have become good citizens. The Chinese will not do this; they will most probably retain their characteristics in every country where they penetrate, and form a distinct class. They are wanted among us for house-servants, and the probability is, they will not be long in coming.

One morning, in perambulating the streets of Havana, we saw a part of a cargo of Chinamen walking in the rear of a Spaniard, who was mounted on horseback, with a whip and a sword. Their time had been purchased, and they were on the way to a plantation, to complete their term of service. A healthier or merrier set of men it would be difficult to remember; they were very thinly clad, without shoes or stockings, some wearing the queer native conical hat of China, and others bare-headed. Each one carried a strip of Canton matting, about six feet long and two wide, which was their only requirement for a bed! Very few had any other baggage, though a dozen or so possessed a few clothes tied up in a strip of muslin as large as a small handkerchief. We followed them to the steamboat that was to convey them across the bay. At the landing there was a short detention, waiting for the boat, and our Americans, seeing their jolly faces expand with a laugh, commenced a dumb conversation with their fingers, to which the Chinese replied most merrily, neither party of course understanding that more was meant than a recognition. Arrived on the sugar estates, the policy of the employer has taught him the necessity of kindness, and the most considerate give them a good long rest before setting them to work. As we said before, the problem has yet to be solved as to the policy of this great introduction of Asiatics, but their present condition will be better understood among us from the facts above stated.

They are now so numerous in Havana, as to create no remark. The gang above described, excited little or no attention as they quietly walked through the streets —not half so much, in fact, as an elderly Virginia gentleman, who made his appearance, daily, in the full dress of the times of Thomas Jefferson: shortish, narrow blue-coat and metal buttons, outside boots, and a Cuba hat! He was the observed of all observers, the Havanese not knowing from what country he could have emanated!

PEAR CULTURE.

MR. HOVEY GIVES IT UP!—THE QUINCE-STOCK.

BY QUERIST.

I have been a looker-on in Venice, Mr. Editor, during the well conducted little *joust* we have had regarding pear culture on the quince, and have not a little applauded the course of the *Horticulturist*, which seems to me to have had but one object, to elicit the truth. You have said throughout, "the dwarf for the garden, the standard for the orchard." Some cultivators and editors who had committed themselves and their nurseries to the quince stock, took fire and threatened war and devastation, blight and destruction, to all who did not think at least that dwarf pear trees were *salable*. I acknowledge I was doubtful which had the best of the argument, and trembled sometimes for the good periodical which admitted such arguments as Dr. Ward's, and when I saw the following, signed "Editor," in Hovey's *Magazine*, I was frightened, for I considered the field in possession of the dwarfs, if somebody did not come to the rescue. I had no idea, then, that the call from the battle field would come from Boston! But it has!!

At page 500 of vol. xxii. of Hovey's *Magazine* (1856) will be found the annexed little bit of criticism. It has since been referred to by the Editor as embracing his decided views, as, in fact, to use his own language, "*an answering of all the objections* which have been made to trees of this kind, and do not deem it worth the time and space we might occupy to enter into a defence of dwarf pears again."

Fortunately for science, I have found the number, "page 500, vol. xxii.," and here it is, the whole of it, being the editor's comments on the communication of a correspondent:—

A more satisfactory answer to the tirade of nonsense which is going the rounds of the papers in reference to the cultivation of "dwarf pears," viz., the pear upon the quince, could not well be given. It is to the point, and coming as it does from one who is amply able, after many years of observation in France and Belgium, where the pear has so long been cultivated, as well as in our own country, to give an opinion, will have the influence to which its sound common sense duly entitles it.

It is one of the most serious drawbacks to all progress in horticultural art, especially in our country, that so much empiricism is mixed up with a thorough scientific knowledge of cultivation; that those who do not know the first principles of a science should attempt to teach those who have made it a life-long study. It is from this fact that such contradictory statements are constantly made, which mystify the new beginner, lead him astray, and force him to rely on his own experience, often dearly bought, and always with great loss of time. With so much apparent information before him, and without the necessary knowledge to enable him to decide where the truth lies, he adopts first one course of culture and then another, *until at last, if his zeal holds out*, he finds at his cost that he has been following the visionary notions of some fancy theorist, rather than the true principles of horticultural science.

This attempt to write down the quince stock is a sample of a thousand similar attempts in the literature of gardening to assail some of the soundest principles of physiological science, and practical art; and it will end, as all similar attempts have, in more thoroughly convincing those who resort to the proper sources of information, how egregiously they have been deceived in following the notions of those who write well enough, or criticize wonderfully wise, but whose practice is as barren as some of the ideas which they attempt to advance.

It is not really, at this late day, worth while to waste time and paper to attempt to controvert such statements as our correspondent briefly reviews in his excellent article; at least we have not thought so. Those who can be induced to believe them, must know but very little of the experience of the past, or be sadly deficient in that knowledge which every one must possess to be a successful cultivator.

We are ready to admit that the quince has been brought into unjust repute by the practice of some inexperienced nurserymen, who recommend many varieties which *will not succeed* upon that stock; but *this is the exception to the rule*,* and is acknowledged by all who fully appreciate its usefulness.

In conclusion, we need only refer to an article in a previous volume (xvii. p. 385), upon the cultivation of the pear upon the quince stock, in which our views are fully expressed, and satisfactory evidence adduced to show its very great value in the culture of this delicious fruit. Subsequent experience has more fully confirmed the opinions recorded in the volume referred to.—Ed.

This is but a recent flare up, Mr. Editor; it is only so late as November, 1856. Let us see how times change, and we with them. The refutation of the above appears in July, 1857, reminding one of the parody of Shakspeare—

"And the funeral bakéd meats
Served for the wedding dinner.

Now let us hear Mr. Hovey's opinion from his own pen, and in his own *Magazine* of July, 1857:—

Were it not for the amateur cultivators, who send their surplus crop to market, it would be difficult to procure superior fruit, notwithstanding the very high price which it always commands. Fortunately, the fine specimens which have occasionally been offered, have shown to what perfection our best fruits may be grown; and those who can profit by example have done so, and fine specimens, though by no means abundant, *are less so than formerly*.† We can only hope that continued attention to the rearing and management of

* Compare this with the subsequent article in which Mr. H. says quite the reverse, if language means anything.—Q.

† "And what," said Mr. Hovey, only in May last, page 212, "is the result of the conflict-

trees will result in a liberal supply of that which is good, in place of the inferior products of our gardens and orchards.

To accomplish this, however, especially with the pear, which stands at the head of our hardy fruits, it is scarcely possible to do so only under what may be termed artificial culture—that is, growing the trees as pyramids or espaliers; so many of the choicest kinds require shelter or protection from our cold winds, that as orchard trees, only in highly favored situations, they cannot be relied upon for constant crops of the finest fruit. We may, in time, possess such varieties, *but at present there are but a few which give good results under such treatment.* Other fruit trees are less capricious in their growth and produce.

Sancho Panza, having just returned home after a long absence, the first thing which his wife, Teresa, asks about, is the welfare of the steed. "I have brought him back," answers Sancho, "and in much better health and condition than I am in myself." "The Lord be praised," said Teresa, "for this his great mercy to me."

Then follows an essay on pruning, thinning, and mulching, and we are introduced to the subject of "watering," in which he says: "There are few sorts of pears which do not, in our climate, at some period of the summer need watering." If one's *orchard* needs mulching and watering, besides high manuring, digging, trenching, root-pruning, thinning and mulching, and now and then a little guano and a little super-phosphate, I am *very much* afraid it will be cheaper to import pears from France or purchase oranges. But here I leave it to others to say whether our advocate for the "Pear on the Quince" gives it up in the 1857 evidence of his opinion or not, and sing with the children, "Oh! Mr. Brown, don't give it up so!"

["Querist" is rather harsh in his article, from which we have been obliged to strike some severe irrelevant remarks. We scarcely anticipated such a recantation, and perhaps Mr. H. will say he has been misunderstood.—ED.]

CAN WE AFFORD TO LIVE IN IT?

OCCASIONALLY some millionaire builds a mansion, which is the admiration of the town, or erects a country house, which, with its grounds, is the pride and boast of its neighborhood. In time the great man dies, becomes insolvent, goes abroad, or tires of his hobby; and then the property is put up for sale. Everybody crowds to see the dwelling, or drives out to the country house. The pictures, the furniture, the hot-house, or the grounds, are by turns the theme of admiration. The night of the sale arrives. The auction room is crowded. To judge from the sea of faces looking up at the crier, one might think that the competition would be enormous. But the fact is the reverse. The auctioneer expatiates long before he can obtain a single offer; the property, at first, seems about to be knocked down to the first bidder; and when, at last, other offers are made, they come almost reluctantly, and though the hammer falls amid a general cry "how cheap!" the purchaser looks as if he already half repented of his bargain.

And why? Simply because it is one thing to buy a costly house, but quite another thing to live in it. Men, before they purchase a stately mansion, should ask themselves whether they can afford to keep it in appropriate style. A hundred thousand dollars for a dwelling makes necessary thousands of dollars for

ing views of these cultivators? Why, while the Boston amateurs who have had THIRTY YEARS' experience, and place some reliance on the experience of foreign cultivators, are enjoying the luxury of delicious pears *in great profusion*, the New York and Philadelphia cultivators are setting out their trees and digging them up again," &c. In July, "we can only *hope* that continued attention *will* result in a liberal supply;" and, "fine specimens, though by no means abundant, are less so than formerly." Rich and fruity, isn't it!—Q.

furniture, thousands for dress and equipage, and thousands more for servants, parties, Newport and Saratoga. There is a fitness in things, demanded by public opinion, which requires these expenses, and to this opinion nine men out of ten sooner or later practically yield, even if they or their wives do not embark in the extravagances at once. But usually there is no backwardness in this respect. Fitznoodle purchases a new house, with rosewood doors, walnut staircases, stained glass windows, and before he has fairly recorded his deed, Mrs. Fitznoodle wants the walls frescoed and panelled with satin, and ten thousand other superfluities. The estimated cost of the movement is soon trebled; the annual outlay grows in proportion; and Mr. Fitznoodle is either ruined, or condemned to groan, forever after, over his increasing expenses.

What is true of the would-be fashionable is just as true, however, of persons with more limited means. If men worth only a hundred thousand dollars or two, ape the millionaire's style of living, so do young merchants, professional men, even clerks and mechanics, ape those richer than themselves. The weakness of wishing to live in a fine house is almost universal. The fine house, too, is relative; for that which a millionaire scorns, the young merchant thinks superb, and that which the merchant looks down on, the clerk pinches himself to obtain. It is amazing how many families live in dwellings beyond their means! The miserable shifts to which such families are driven in order to keep up appearances, are melancholy to think upon. In the end, too, the head of the family dies, having laid by nothing, and the widow and children sink into a hopeless poverty, the more poignant to them, because of the mortification attending it. It would be well if the question was oftener asked, when moving into a better house is proposed, "Can we afford to live in it?"

RHODODENDRONS.

BY JOHN SAUL, WASHINGTON CITY, D. C.

Foremost among evergreen shrubs stands this beautiful genus; beautiful in its foliage and habit of plants, but beautiful, gorgeous and magnificent in its flowers. This is true of our native varieties; for what more beautiful than a good variety of Catawbiense! It is true of the European species, and more true still of the beautiful scarlet species from the Himalayas, and the innumerable species from Sikkim; Borneo, also, producing some magnificent epiphytal species. The few remarks I am about to make will be in reference to our native species, or such as may be crossed to advantage with them. Of late these beautiful plants are attracting some attention, but unless care is taken in selecting varieties of hardy parentage, disappointment is sure to follow. All our American species and varieties may be cultivated. Among the best are the following: R. Catawbiense,* R. maximum, R. M. album, R. M. purpureum, R. punctatum, R. azaleoides, R. Catæsbæi, R. Californica, &c. Here is a very nice list to begin with, and the three first are as good as many of the finest foreign varieties. The first, R. Catawbiense, has been used in Europe in crossing with the eastern species more than any other, it possesses so many good qualities. The habit and foliage are good; it has a large finely-formed truss of bloom, the individual flowers well-shaped. This crossed with arborea produced altaclarense, the first scarlet hybrid

* The variety figured some time back in the *Horticulturist*, judging from the plate, appears to be a variety of this.

rhododendron that appeared in England, and hardy; it was raised at Highclere* in Hampshire, and caused quite a sensation among the admirers of this flower at the time. Many other good seedlings were subsequently raised, but the great fault of these first seedlings, was their early season of blooming, being generally destroyed by cold winds or frosts; latterly, however, this has been overcome by repeated crossing with the late blooming species, until we have now varieties sufficiently late, and of fine shape and color. If any of our cultivators would like to experiment in this way, take a plant of R. Catawbiense, or R. maximum, and in place of crossing with a hybrid of the first generation, as altaclarense, cross with the third or fourth generation (having one of these as parent in each cross); such would be pulchellum, Towandii, elegans, Standishii, Mrs. Loudon, &c., the offspring will be a seedling nearly as hardy as its American parent; and, by following this up, a race will be found as hardy as our native varieties, with brilliant, finely-shaped flowers. There is another great advantage in this, whilst the first and second generation of hybrids take many years to bloom, the third and fourth bloom at a very early age, and in the greatest profusion. Many persons imagine they can purchase rhododendrons in Europe at a very cheap rate; so they can such varieties as are usually planted in woods as shelter for game, and principally composed of the poorest varieties of Pontica; but a grower of such plants would no more take these, than an orchardist would a lot of seedling crabs to plant his orchard with; when a good variety is produced, it is increased by grafting, and as these require a little more care than common things, good varieties of rhododendron command a good price. Varieties which are increased in this way will command two-and-sixpence to three-and-sixpence each, whilst rarer varieties run a great deal higher.† Not their best seedlings can you get; breeders of rhododendrons, like raisers of other things, know from the parentage what to expect, and by examining the foliage they can pick out all the finest and best varieties with scarcely a *mistake*. True, raisers are sometimes deceived in this way, but it is not often; the cullings of the beds are then sold cheaply to some of our bargain-hunting gentlemen, when they doubtless think they have succeeded admirably. From parentage they cannot judge unless acquainted with rhododendrons and their breeding. To illustrate this, take Catawbiense and cross it with altaclarense, and the result will be a good scarlet hybrid; but cross the latter with a similar hybrid, as pulcherrima, and the result will be a race of the most miserable and worthless hybrids. I know of no class of shrubs where more care or judgment is necessary than in this very one, that good varieties alone may be selected.

Rhododendrons are more readily raised from seeds than persons unacquainted with the operation may imagine; the seed ripens about February; it is very minute, and should be sown immediately in pans or pots of very sandy peat or leaf mould; the seed had better not be covered, merely shaken over the surface of the soil, and the latter kept covered with a little damp moss, until the seeds are up and in their seed leaf, when it should be removed; the seedlings must,

* Mr. H. Burn, of Tottingham Park, England, began to hydridize about the same time. Fifteen years ago, on visiting Tottingham Park, Mr. B. pointed out a large plant of R. Catawbiense, from which he raised the bulk of his seedlings. It was at the time growing with his other rhododendrons out-doors, but he remarked he was in the habit of putting it in a tub early in spring, and force it that he might have it in bloom the same time as arborea.

† I am aware it has been said these may be purchased much lower; but these are mixed seedlings. A few years since a large lot came to this city from one of the most noted firms in England; they should have been Catawbiense and maxima, chiefly the former, but one-tenth did not belong to these varieties; the consequence is, that sun and frost have nearly destroyed the whole.

however, be kept shaded. I ought to have said when sown, the pots should be placed in a gentle hotbed or propagating house, where the atmosphere is close, humid, but not very hot; they had better for the first year be grown in a house of this kind. By the first autumn they ought to be three to four, and many six inches high. The first winter they will require shelter in a close frame or pit; all hardy varieties, such as Catawbiense, maxima, &c., can be planted out in spring in prepared beds of peat or leaf mould, &c., in a shady situation; in about two or three years they will commence flowering, though many will not for three or four, and some later. In a climate such as that of England, these plants may be cultivated in open exposed situations; but in such a situation here these plants would suffer under our brilliant suns, their natural habitats being the shade of forests. Under the shade of trees will therefore be found their proper place. These beds or masses may be formed eighteen inches deep, and any given width, and filled with sandy peat, or leaf mould. As the former is not often to be had, the latter will answer every purpose; with it may be mixed a good quantity of sawdust, either in a fresh or decomposed state. This last has been found one of the best materials to mix with rhododendron soils; the small fibres will root freely into it, even in a fresh state; this may appear strange to some, yet it is nevertheless true, and I would strongly recommend it to persons forming rhododendron beds. Those who have them made already will find a mulching of sawdust over their beds, three or four inches thick, of great advantage.

In planting trees and shrubs the universal rule is, plant no deeper than they stood before. Though good advice for trees in general, it will not hold good for rhododendrons; on the contrary, I would recommend having them planted three or four inches deeper than they stood before; this is the practice of the best growers. I shall probably be required to give a reason for this; I would say it arises from the fact that their roots are mere fibres or threads, and they are disposed to produce them from the stems when planted deep or mulched over. If observed in their native habitats, it will be found that there is almost invariably a quantity of decayed leaves and half decayed, congregated about the stems to a considerable height; hence the good effects of planting deep or mulching high.

["Mulching high" will answer alone; the best success will be had by those who plant near the surface, in fact only sift leaf mould and sand on the roots, staking them, and letting nature have the same process she loves in the native place of these lovely plants.—ED.]

THE AMERICAN PLANE-TREE.

BY E. N. PLANK, WOLCOTT, NEW YORK.

THERE are few, if any, of our native forest trees more worthy of the attention of the student of nature, than the American plane-tree (*Platanus occidentalis*). Its broad and ample foliage, the grandeur of its proportions, and the beautifully variegated appearance which its outer bark presents, combine to render it one of the most attractive objects of American forest scenery. Not adapting itself so readily to a cultivated state as some of our native trees, to see it in all its beauty, it must be sought for in its favorite habitat, the alluvial banks of our creeks and rivers. Until the recent discovery in California of the Sequoia gigantea, the plane-tree enjoyed the distinguished honor of being the largest known tree in America. And though it must now yield the palm to its Californian rival, yet its own merits are none the less. There is now standing within two miles of the village of Wolcott, N. Y., a tree of this noble species, of such giant proportions,

as to render it worthy of being recorded among the wonders of the vegetable kingdom. The tree consists of a single trunk attaining the height, perhaps, of eighty feet, and is now lifeless and hollow throughout its entire length. At a distance of two feet from the ground, it is thirty-three feet in circumference, and varies but little from this for some distance above. My feelings, as, in company with a few friends, I for the first time approached the old tree, bordered, I must confess, not a little upon veneration; there it stood, like a vast column rising majestically in the air, surrounded by its brethren of the forest, which, though of average size, compared with it, were pigmies. What a train of ideas enter the mind while contemplating such a tree. There it may have stood, perhaps, for a thousand years; and could it speak, what stories it might tell of past ages. It may have been a large tree when Columbus first landed on our shores, and a moderately-sized sapling when the Northmen, from the decks of their rude ships, first saw the sombre pine forests of New England. The old tree did speak, though in a voice, perhaps, inaudible to all but the writer. It spoke of the pleasure and profit to be derived from the study of nature's works, and of the happiness of those to whom it is given to understand her mysteries. But the old tree is dead, and soon the winds of heaven will lay its gigantic and venerable form prostrate in the dust, when mouldering back to its original elements, it will in its turn furnish sustenance for others of its species. Thus in the economy of nature, the past is linked to the present, the dead with the living, and thus the great cycle of her operations is forever kept complete. Yours, &c.

[The American Buttonwood, *Platanus Occidentalis*.—Loudon and other writers some years ago stated that the American buttonwood or plane-tree was attacked with the same disease in England as had affected it here. The following remarks of Sir W. Hooker, seem to show that the P. occidentalis is rare in England, P. acerifolia having probably been mistaken for it: "I think, however, we have arrived at the conclusion that P. acerifolia, though nearest in botanical characters to P. occidentalis, is nevertheless quite distinct, readily distinguished by those who have paid attention to it, and not introduced from any part of the New World; that its actual locality is not yet ascertained, and that we want a clearly defined specific character derived from flowers and fruit as well as the foliage, and taken from the living plant; and further, we want to know if there are any old trees of true P. occidentalis in the country. Our own rich herbarium of native species of Platanas contains P. orientalis, L. (and the only one of the Old World), P. occidentalis, L. (known by the short and broad lobes to the leaves, and the fertile heads of flowers being solitary), P. mexicana, moricand (perhaps too near P. occidentalis), and P. racemosus of Nuttall (P. Californica, Benth.).]

LEGENDS OF TREES, NO. 1.

Mr. Editor: Before me I have a volume of Sears' *Pictorial Library*, and coming across an article headed "Legends respecting Trees," I thought I would copy a few paragraphs from time to time, for occasional insertion in the *Horticulturist*. As the "Legends" are highly interesting, I presumed it would be a valuable acquisition to the pages of your valuable journal.

Yours, truly, Wm. H. Alexander.

"The *White Poplar*, according to ancient mythology, was consecrated to Hercules, because he destroyed Cacus in a cavern of Mount Aventine, which was covered with these trees; and, in the moment of his triumph, bound his brow with a branch of one as a token of his victory. When he descended into the

infernal regions, he also returned with a wreath of White Poplar round his head. It was this, says the fable, that made the leaves of the color they are now. The perspiration from the hero's brow made the inner part of the leaf white; while the smoke of the lower region turned the upper surface of the leaves almost black. Persons sacrificing to Hercules, were always crowned with branches of this tree; and all who had gloriously conquered their enemies in battle, wore garlands of it, in imitation of Hercules. It is said that the ancients consecrated the White Poplar to Time, because the leaves are in continual agitation; and being of a blackish-green on one side, with a thick white cotton on the other, these were supposed to indicate the alternation of day and night.

"The *Black Poplar* is no less celebrated in fable than its congener abovementioned. According to Ovid, when Phaeton borrowed the chariot and horses of the sun, and, by his heedless driving, set half the world on fire, he was hurled from the chariot by Jupiter, into the Po, where he was drowned; and his sisters —the Heliades—wandering on the banks of the river, were changed into trees—supposed, by most commentators, to be Poplars. The evidence in favor of the poplar, consists in there being abundance of Black Poplars on the banks of the Po; in the Poplar, in common with many other aquatic trees, being so surcharged with moisture as to have it exuding through the pores of the leaves, which may thus literally be said to weep; and in there being no tree on which the sun shines more brightly than on the Black Poplar, thus still showing gleams of parental affection to the only memorial left of the unhappy son whom his own fondness had contributed to destroy.

"The *Apple-tree*, so singularly connected with the first transgression and fall of man, is distinguished alike in the mythologies of the Greeks, Scandinavians, and Druids. The golden fruits of the Hesperides, which it was one of the labors of Hercules to procure, in spite of the sleepless dragon which guarded them, were believed by the pagans to be apples. Hercules was worshipped by the Thebans under the name of Melius, and apples were offered at his altars. The origin of this custom was the circumstance of the River Asopus having, on one occasion, overflowed its banks to such an extent as to render it impossible to bring a sheep across it which was to be sacrificed to Hercules, when some youths, recollecting that an apple bore the same name as a sheep in Greek (*mêlon*), offered an apple, with four little sticks stuck in it, to resemble legs, as a substitute for sheep; and after that period, the pagans always considered the apple as especially devoted to Hercules. In the Scandinavian *Edda*, we are told that the goddess Iduna had the care of apples which had the power of conferring immortality, and which were consequently reserved for the gods, who ate of them when they began to feel themselves growing old. The evil spirit, Loke, took away Iduna and her apple-tree, and hid them in a forest, where they could not be found by the gods. In consequence of this malicious theft, everything went wrong in the world. The gods became old and infirm, and, enfeebled both in body and in mind, no longer paid the same attention to the affairs of the earth; and men, having no one to look after them, fell into evil courses, and became the prey of the evil spirit. At length, the gods, finding matters getting worse and worse every day, roused their last remains of vigor, and combining together, forced Loke to restore the tree.

"The Druids paid particular reverence to the apple-tree, because the mistletoe was supposed to grow only on it and the oak, and, also, on account of the usefulness of its fruit. In consequence of this feeling, the apple was cultivated in Britain from the earliest ages of which we have any record; and Glastonbury was called the apple-orchard, from the quantity of apples grown there previous to the time of the Romans. Many old rites and ceremonies are therefore connected

with this tree, some of which are practised in the orchard districts even at the present day. 'On Christmas Eve,' says Mrs. Bray, 'the farmers and their men, in Devonshire, take a large bowl of cider, with a toast in it, and carrying it in state to the orchard, they salute the apple-trees with much ceremony, in order to make them bear well next season.' This salutation consists in throwing some of the cider about the roots of the tree, placing bits of the toast on the branches, and then forming themselves into a ring, they, like the bards of old, set up their voices and sing a song, which may be found in Brand's *Popular Antiquities*. In Hone's *Every-Day Book*, this custom is mentioned, but with some slight variation.

"The wassail bowl—drunk on All-Hallow E'en, Twelfth Day Eve, Christmas Eve, and on other festivals of the Church—was compounded of ale, sugar, nutmeg, and roasted apples, which every person partook of, each taking out an apple with the spoon, and then drinking out of the bowl. Sometimes the roasted apples were bruised, and mixed with milk or white wine, instead of ale; and, in some parts of the country, apples were roasted on a string, till they dropped off into a bowl of spiced ale beneath, which was called "Lamb's Wool." The reason of this name (which is common to all compounds of apples and ale) is attributed by Vallancey to its being drunk on the 31st of October (All-Hallow E'en), the first day of November being dedicated to the angel presiding over fruit, seeds, &c., and therefore named *La Mas Ubhal*—that is, the day of the apple fruit—and this being pronounced lamo-sool, soon became corrupted, by the English, into lamb's wool. Apples were blessed by the priests on the 25th of July, and an especial form for this purpose is preserved in the manual of the Church of Sarum.

"The custom of bobbing for apples on All-Hallow E'en, and on All-Saints' Day, which was formerly common over all England, and is still practised in some parts of Ireland, has lately been rendered familiar by M'Clise's masterly painting of the 'Sports of All-Hallow E'en.' A kind of hanging-beam—which was continually turning—was suspended from the roof of the room, and an apple placed at one end, and a lighted candle at the other. The parties having their hands tied behind them, and trying to catch the apple with their mouths, frequently caught the candle instead. In Warwickshire, apples are tied to a string, and caught at in the same manner, but the lighted candle is omitted; and, in the same county, children roast apples on a string on Christmas Eve, the first who can catch an apple when it drops from the string, getting it. In Scotland, apples are put into a tub of water, and then bobbed for with the mouth.

"The *Ash*, according to heathen mythology, furnished the wood of which Cupid made his arrows before he had learned to adopt the more fatal cypress. In the Scandinavian *Edda*, it is stated that the court of the gods is held under a mighty Ash, the summit of which reaches the heavens, the branches overshadow the whole earth, and the roots penetrate to the infernal regions. An eagle rests on its summit, to observe everything that passes, to whom a squirrel constantly ascends, to report those things which the exalted bird may have neglected to notice. Serpents are twined round the trunk, and from the roots there spring two limpid fountains, in one of which wisdom lies concealed, and in the other, a knowledge of the things to come. Three virgins constantly attend on this tree, to sprinkle its leaves with water from the magic fountains, and this water, falling on the earth in the shape of dew, produces honey. Man, according to the *Edda*, was formed from the wood of this tree. Ancient writers of all nations state that the serpent entertains an extraordinary respect for the Ash. Pliny says that if a serpent be placed near a fire, and both surrounded by ashen twigs, the serpent will sooner run into the fire than pass over the pieces of Ash; and Dioscorides asserts, that the juice of Ash leaves, mixed with wine, is a cure for the bite of that reptile.

"The *Oak* appears early to have been an object of worship among the Celts and ancient Britons. Under the form of this tree, the Celts worshipped their god Tuet, and the Britons Tarnawa, their god of thunder. Baal, the Celtic god of fire, whose festival (that of Yule) was kept at Christmas, was also worshipped under the semblance of an Oak. The Druids professed to maintain perpetual fire, and once every year all the fires belonging to the people were extinguished, and relighted from the sacred fire of their priests. This was the origin of the Yule log, with which, even so lately as the middle of last century, the Christmas fire, in some parts of the country, was always kindled, a fresh log being thrown on and lighted, but taken off before it was consumed, and reserved to kindle the Christmas fire of the following year. The Yule log was always of Oak, and as the ancient Britons believed that it was essential for their hearth fires to be renewed every year from the sacred fire of the Druids, so their descendants thought that some misfortune would befall them if any accident happened to the Yule log.

"The worship of the Druids was generally performed under an Oak, and a heap of stones or cairn was erected, on which the sacred fire was kindled. Before the ceremony of gathering the mistletoe, the Druids fasted for several days, and offered sacrifices in wicker baskets or frames, which, however, were not of willow, but of Oak twigs, curiously interwoven, and were similar to that still carried by Jack-in-the-green on May-day, which, according to some, is a relic of Druidism. The well known chorus of 'Hey, derry down,' according to Professor Burnet, was a Druidic chant, signifying, literally: 'In a circle, the Oak move around.' Criminals were tried under an Oak-tree, the judge, with the jury, being seated under its shade, and the culprit placed in a circle made by the chief Druid's wand. The Saxons also held their national meetings under an Oak, and the celebrated conference between the Saxons and the Britons, after the invasion of the former, was held under the Oaks of Dartmoor." (*To be continued.*)

BOYDELL'S TRACTION ENGINE AND ENDLESS RAILWAY.

On Wednesday, May 27, we joined the company which went to Wimbish Hall Farm, to witness the trial of a machine that, beyond a doubt, is one of those inventions destined to supersede, to a certain extent, the most ancient implement of husbandry, the dextrous management of which has hitherto constituted the proudest achievement of the agricultural laborer, and the glory of the farmer. Notwithstanding the claims that prescription confers upon this old and favorite servant, simplified and perfected as it has been by science, and beautified by artistic skill, its condemnation as a cultivator solely dependent for its application upon animal power, is sufficiently insured to render its decline but a question of time. Ere long, it must be allied with, or superseded by, the monster energy of steam in place of horse power.

Wimbish Hall is situated at the distance of four miles from Saffron Walden, in Essex. On the farm on which the trial of the Traction Engine took place, the soil consists of a strong, *very strong* clay, common to the district, but having a subsoil of a mixture of clay, sand, and marl. The field on which we found the machine at work, was, perhaps, as unfavorable a one, for the success of the trial, as could have been selected in the whole kingdom. With a soil naturally heavy, adhesive, and intractable, it had, as a matter of course, been latterly neglected by the out-going tenant; and, being under a dead, untilled fallow, was sufficiently hard-baked by the sun, wind, and rain, alternately, to make it difficult enough to

manage under any circumstances, but particularly so with a new machine, handled by men unaccustomed to its peculiarities. Added to these disadvantages, was the arrangement by which the land was to be ploughed *athwart* the old ridges, which greatly increased the difficulty of working the ploughs. It was remarked to us by several old farmers, that "if they worked well on that land, they would do so anywhere."

There were only three ploughs at work when we reached the field. On the first day, there were, as we understood, six, or, rather, three double ploughs; but it was evident these were not adapted, in point of strength, to the stubborn character of the soil, for all of them were broken or strained. Those subsequently used were the common ploughs of the farm. The machine was travelling at the rate of about three miles per hour, or probably two and three-quarters miles, exclusive of stoppages. Its motion was steady and direct; and it appeared to be under as complete control, in regard to stopping and backing, *to an inch*, as a horse, the ploughs performing their part with perfect efficiency, if not with ease to the men who held them, and who had evidently no sinecure berth of it. The furrows turned were fully a foot in width, and four, six, eight, and even ten inches in depth, accordingly as the managing engineer wished to test the capability of the machine. We particularly observed that the furrows, instead of being turned over in one continuous, unbroken surface, which, in the common ploughing of such land, renders the harrow useless until the soil has been mellowed by the atmosphere, were, by the quick action of the ploughs, broken up and separated, so as to expose the whole body of earth to the action of the air. We have no doubt that, if necessary, the harrows might have been efficiently employed the next day; for, on pressing the soil with the foot, it at once crumbled to pieces. We mention this as of particular importance on so adhesive a soil as the one on which the trial took place. In conversation with several of the farmers of the district, they one and all expressed their approval of the manner in which the ploughs performed their work. Some of the older ones feared the ploughing "was too deep," admitting, however, at the same time, that, where the land-drains had been dug (which, of course, were much deeper), they would expect the best crops, either of corn or roots. A delay of three hours took place, in consequence of the breaking of a piston belonging to the pump. This, however, was neatly repaired by a smith in the village, and the machine got to work again about four o'clock.

Having thus given our opinion of the work performed (in which respect, we consider the trial to have been successful), we have the less pleasing, but not less necessary task of stating what, according to our views, are the most apparent defects of the machine. These are chiefly confined to the mode of traction, which, as applied when we saw it, appeared irregular and confused, rendering the ploughs very liable to be thrown out of their work. It struck us that this was chiefly owing to the distance between the tractive power and the plough; or, in other words, the length of the traction-chain, which increases both the difficulty of holding the plough and the irregularity of its movement. In common ploughing with horses, it is considered that the nearer the plough is to the motive power, the steadier and more regularly it works—on the principle that the segment of a small circle is under more complete control than that of a large one, the gyrations of which, too, are wider when a disturbance takes place.

Another inconvenience (arising, we apprehend, from the same cause), is the great strain upon the men holding the ploughs. This, on such a soil as that of Wimbish Hall Farm, must very soon exhaust their strength. And besides, the chains approaching so near each other, are liable to get entangled, whilst the men find it very difficult to keep clear of them and avoid an accident. They certainly

ought to have nothing to think of but the work before them, which, with a machine of such power, requires undivided attention; and this cannot be given with the chains in such close proximity to the legs of the ploughmen as was the case on Wednesday. Possibly, this objection may be, in some respect, modified with the double ploughs, which allow more space between each chain. But the former objection holds equally good with them as with the single plough, being, at the same time, of double the importance in regard to delay.

The Endless Railway, unsightly though it be, performed its task with perfect efficiency, and conveyed the eight or ten tons' weight over the land, without any material indentation to mark its pressure. The steam-engine was of ten-horse power; but, with a pressure of seventy pounds, is equal to thirteen-horse. This allowed four and one-third horse power to each plough, though it was the opinion of some of the farmers that it would have required five or six horses to have drawn a furrow of the same width and depth on the same land. The engine consumes about ten cwt. of coals per day, when at full work; and the engineer calculated that it would turn over eight acres of such land as that of Wimbish Hall Farm, in the same time.

On the whole, we consider the trial to have been a perfectly successful one, and that it demonstrates, to a certainty, the applicability of steam, as a motive power, to the cultivation of the land. Boydell's machine had already been tried with success at Chelmsford, Thetford, and other places, upon soil both of a kinder and lighter texture, and that had also been previously under proper cultivation. At Thetford, as we understand, with six ploughs, it turned over twenty acres per day, and had the whole power of the engine been applied, it would have completed thirty acres. It only wanted a trial on such soil as that at Wimbish Hall, to complete the series. We consider *that* and the Thetford soil as the two extremes of light and heavy land, after cultivating which with success, no doubt can be entertained of the machine working well upon soils of intermediate texture.

Whatever defects, therefore, the machine may exhibit in this, its infancy, they may scarcely interfere with the question at issue, as they will undoubtedly be rectified as experience points them out. Certainly, we have advanced far enough already to be assured that steam-ploughing is perfectly practicable. And with so many mechanical heads at work on the subject, we confidently expect, ere long, to see a perfect and simplified machine, applicable to all soils, and at least as economical as horse-power.—*London Farmer's Magazine.*

NEW TEA ROSE, SOUVENIR D'ELIZE.*

FROM THE LONDON FLORIST.

THIS new tea rose, which is very correctly represented in our plate for this month, is a seedling raised by M. Marest, Nurseryman, of Paris, and was taken by our artist, Mr. Andrews, from a plant in the nursery of Standish & Noble, of Bagshot. This addition to our list of tea roses is a very desirable and beautiful one, fragrant, and quite hardy, which is an advantage not to be lost sight of by rose growers; for the great failing in the beautiful section of roses to which this belongs, is that they are rarely hardy enough to thrive without some protection during winter, for which reason we do not find them so extensively grown as out-door plants as they otherwise would be, and for which their delicate shades of color and delightful fragrance would render them invaluable.

Standish & Noble pay great attention to the introduction of new roses from

* See Frontispiece.

the continental gardens, and import annually all the best new kinds. They have very kindly furnished us with a select list of a few good new roses, which have been well proved in their nursery, and which will, we doubt not, be very acceptable to rose growers in making additions to their stock.

H. P. Victor Trouillard; flowers of the deepest crimson, foliage very fine, and in every respect a magnificent rose. The entire stock of this variety is in our own (Messrs. Standish & Noble's) hands; we purchased it from the raiser, a gentleman at Angers.
P. M. Madame Edouard Ory; bright carmine; a fine globular flower.
H. P. Madame Masson; large, full flower; clear crimson.
H. P. Emperor Napoleon; very fine, bright crimson; petals, velvet-like.
H. P. General Jacqueminot; vivid red; one of the finest roses yet raised.
H. P. Gloire de France; large and full; crimson shaded.
H. P. Madame Place; lively rose color.
H. P. Colonel de Rougemont; clear carmine; shaded.
H. P. Madame Cambaceres; rose color; a charming flower.
H. P. Souvenir de la Reine d'Angleterre; very large flower; lively rose color.
H. P. Triomphe de l'Exposition; bright, reddish crimson.
H. P. Lord Raglan; centre, bright red; outer petals, purplish.
H. P. Prince Noir; deep crimson; petals, like velvet.
M. P. Salet; bright rose.
B. Gloire de Dijon; pale flesh color; centre, yellowish; large, full flower.
H. P. Jules Margottin; carmine; fine, full flower; very handsome.
P. Nicholas d'Assas; clear rose; very full; finely imbricated.

SOMETHING ABOUT THE FRUIT CONVENTIONS.

BY THE LATE A. J. DOWNING.

I AM, as you know, too much of an "old digger," to attend political meetings, agricultural fairs, or even fruit conventions. I am not only a little stiff in my joints, but it makes me nervous and irritable to see mere spouters and stump-speechifyers having most of the talk to themselves in such places, while the honest, sensible men, who have something to say, sit with their mouths closed.

However, I am fond of fruit; and as it is plain that we are to be a great fruit country, and that orchards, good apples, pears, and peaches, are to be every landholder's possession who cares enough for them to plant the trees, I look with a little more interest than common on these fruit conventions.

There is no doubt at all that a great deal of good will grow out of annual meetings of all the most experienced fruit growers in the country. There is a great deal of knowledge among practical men which never gets into the books; and many a rough hand, who writes his own name as if he were jumping a bog meadow, has picked up certain bits of experience in his lifetime, that are worth, if you can get it out of him by talking, a good many more chapters than are to be found in many current books on the same subject. It is quite natural that, when such men get together, they should set each other agoing, if not by set speeches, at any rate by a chat in the corner; and I have no doubt that as much good is done in this sort of familiar intercourse among brother cultivators as in all others.

But when people go to a national or general convention, they must not take crab-apples and choke pears in their pockets. I mean, in plain English, that they must not go crammed full of sectional feelings and local jealousies. It is very proper and very praiseworthy for me to be fond of my own horses and dogs, my own cornfields and meadows; but it will not do for me to imagine them better than anybody else's, and tell my neighbors so to their faces. All sorts of social

intercourse, societies, associations, and communities, are based upon a spirit of *compromise;* that is, every man gives up something of his own pride and selfishness, in order that the general good may be the gainer by it.

I "*dig*" into this subject a little, because I see the absence of this spirit of compromise appears to have retarded a little the onward march of the fruit growing interest in the convention. I say *appears*, for I don't know that this is really the fact; for I am told that the conventions, both at Buffalo and New York, were both successful and useful things; but some of the journals, and especially the agricultural papers, have fussed and fumbled over the meeting of these conventions, each giving a local coloring to the matter, till they have almost made it appear that harmony is impossible, when, in fact, there is not the least cause for discord.

According to the papers, Western fruit growers can't meet with Eastern fruit growers, and Eastern knowledge and experience are worth nothing in the West. Softly, my friend. This may be all very well for editors, who wish to rally local parties and patronage round their own presses, but it is a *blight-wind* to your interests, depend upon it. Exactly what you want in convention, is to bring all sorts of different experiences together—the Boston man, who coaxes his half dozen Bartletts in his back yard with guano, till he makes prize specimens, and the Ohio man, who gathers his apples from orchards that cover half a township, and thinks he is a scientific cultivator. It is exactly by getting all these growers together in convention, and comparing notes, and sifting opinions, that you are to get at the real kernel of the matter; for there *is* a kernel to every nut as well as a husk. Those who sit down amicably and crack the nut, are very likely to get at the kernel; those who wrangle and quarrel, are very likely to get only the husk.

Local patriotism is a good thing. I might call it the foundation stone of the national edifice; for it don't need any argument to prove that if a man don't love his own family, neighborhood, and State, he won't love anything rightly. But an edifice is not all foundation; and unless the stones at the bottom of the wall are contented that there should also be stones at the top, it is easy to see there can be no regular house. I have been a little amused with this bubbling-up of local patriotism in various articles in your journal, intended to be merely descriptive of the productions, and the fertility of certain sections of our common country. A writer in Vermont is certain that no part of America can beat the shores of Lake Champlain for apples; another, in Illinois, is equally sure there is no part of the Union equal to his for the same fruit. One pomologist, at Buffalo, feels confident that, all things considered, Buffalo is about the best soil and climate in the Union for all kinds of fruit; while you, in the valley of the Hudson, claim to raise the best of everything, from Denniston's famous Albany plums to Pell's still more famous Newtown Pippins.

Very little hurt will come out of this pleasantry in the right place. It is only chuckling a little over the good things Providence has sent us. But we must not grow too serious about it, and declare that we of the West can beat the East in orchards, and don't care to be dependent on her; or we of the East have got all the science, and can teach all the rest of the nation. There is something to learn all round; and if we have learned all that is to be learned at home, and in our own heaven-blest neighborhood, State, or county, why then there is a great deal more to be learned by watching sharply what cultivation and cultivators have done all over the country. But this kind of learning can only be got at by a little forbearance and courtesy towards others, and not talking too large about our own breed of cattle.

As some of the noisiest of this species of tin-trumpet orators have probably

gone off to California since last season, I suppose it will be found easy for our future fruit conventions to unite in some plan of comfortable, harmonious action for the future. I am the more confident that this will be the case, from the spirit of good-will which I see maintained in your journal, taking the ground that a genuine fraternity of interests is the only means of bringing out all the information in the country.

Certainly it is a pleasant thought, that all the leading fruit growers in the country can meet and fraternize once a year, bringing from all parts of the Union the stores of their experience, and the fruits of their culture, and raising up a pyramid of knowledge for the general good. It is so pleasant a thought, that I will leave it for your readers to revolve in their minds, and see what good may come out of it. Yours, &c., AN OLD DIGGER.

GARDEN VEGETABLES, NO. 9.—CABBAGE AND BORECOLE.

BY WM. CHORLTON.

EVERYBODY who attempts to grow garden vegetables, and has possession of only a "city lot," thinks of planting a portion with Cabbages; but the same everybody does not always cultivate the best varieties, or manage what they do grow in the best manner. Owing to either one or both of these mistakes, they have for their trouble a product which, if not positively unwholesome, is far inferior in quality to what may be obtained. A well-grown and good Cabbage, when rightly cooked, is sweet flavored, tender as marrow, and free from all disagreeable or pungent odor or taste, and in such state, if it be not one of the most nutritious, is certainly a very acceptable kitchen esculent. In any other condition, it is not fit for human food, being partly indigestible, and causing flatulency.

All the varieties of the Cabbage and its allies have been produced from a comparatively worthless plant found growing wild on the sea-shores of England, and some of the other mild parts of Europe. "The *cabbage tribe*," says Loudon, in his usually expressive style, "is, of all the classes of cultivated culinary vegetables, the most ancient as well as the most extensive. The *Brassica oleracea* being extremely liable to sport, or run into varieties and monstrosities, has, in the course of time, become the parent of a numerous race of culinary productions, so very various in their habit and appearance, that to many it may appear not a little extravagant to refer them to the same origin. Besides the different sorts of white and red Cabbage, and savoys which form the leaves into a head, there are various sorts of Borecoles which grow with their leaves loose in the natural way, and there are several kinds of cauliflower and broccoli which form their stalks or flower buds into a head. All of these, with the turnip-rooted Cabbage and the Brussels sprouts, claim a common origin from the single species of Brassica above mentioned." Notwithstanding this immense variety, and the extreme liability to sport, the individual sorts may be kept perfectly true to character when not in the neighborhood, or under the influence of other kinds whilst in flower; consequently, where the saving of seed is an object, it will be well to bear this in mind.

As there is no service to be rendered by an extensive list, it is enough, for all practical purposes, to enumerate a few of the best, so as to supply all the requisitions for culinary use. The following, therefore, will secure this:—

Cabbage or Close-headed Varieties. Small Early York.—A very early kind, close-headed, oval-shaped, small size, and good flavor. This and the next mentioned, are the best two for the first early crop. The seed should be sowed from

the middle to the last of September, and the young plants protected through the winter, as advised below. Plant, finally, fifteen inches apart.

Large York.—Larger than the foregoing, equally good, but some two weeks later. Plant out eighteen inches apart.

Enfield Market.—A good and early sort, of very delicate flavor, but not quite so hardy as the two last. Plant eighteen inches asunder.

Early Battersea.—A nice, roundish-headed Cabbage, of fine quality, and very tender when well cooked. Plant eighteen inches apart.

Early Vanack.—This sort does not head as firm as most others, but is very sweet and delicious, and has also the good property of being fit for use whilst quite young. Plant two feet by eighteen inches asunder. These three, last described, may be sown early in February, in cold frames, and, when large enough, planted into the open ground. They will thus succeed the Early York, and continue to head until the savoys take their place in the fall.

Dwarf Green Curled Savoy.—The smallest of the savoy class, and the best, in all respects, for the kitchen. Color, deep green, nearly to the centre of the heart, which is not very compact. Leaves, thick, fleshy, and rugose. If sown in the open ground, from the middle to the last of March, according to latitude, this sort will be ready in September. Plant eighteen inches asunder.

Large Green Globe Savoy.—Larger than the preceding, and produces a much closer head; a good and profitable sort. Sown the middle of April, it will be good from the beginning of October until December. Plant two feet asunder.

Flat Dutch, or Drum-head.—This is the best for winter keeping. It makes a large, solid, and flat head. If sown the last week in May, it will be in use from November, and may be preserved through the winter as follows: When it is apprehended that the winter is going to set in (but not sooner), dig up the whole, leave the roots and stems attached, but pull off any decayed leaves; convey them to a dry spot; place them nearly close together, with the heads downwards, on the ground level, so as to form a bed about five feet wide. Outside of this, all around, sink a trench, and throw the soil taken out of this (after breaking it up well with the spade) amongst them, so as to cover the heads completely, and if the winter be very severe, throw over the top any kind of litter, to keep out the frost. As they may be wanted for use, they may be drawn out by the stalks, and will be found fresh, and as good as when first buried. Where there is the convenience of an open shed for this purpose, it is still better, as the rains and snow of winter are prevented from penetrating the soil; but if put up in a close cellar, the Cabbages are subject to rot, and lose the proper flavor.

Dwarf Red Dutch.—The best of the red or purple kinds. It may be sown in the open ground, in April; afterwards, planted out two feet apart, and will head late in the fall. The plant is of dwarf habit, blackish-crimson in color, and produces a globular, compact, and solid head. The red varieties are generally only used for pickles, although some few people boil them with salt pork, and so make a very savory, but rather dirty-looking mess of food.

Borecole, or Open-headed Sorts. Brussels Sprouts.—This variety is not exactly a Borecole, in the strict meaning of the term, but it may be ranked as such. The stem will rise, in good ground, to the height of four feet, on the top of which is a partially closed, flat crown of incurved, roundish leaves (forming the head), and on the whole length of the stalk below, there are numerous small sprouts (like miniature cabbages), that serve for a second cutting after the top has been removed. The flavor is quite equal to asparagus, but the plant will not bear extreme frost. If sown the beginning of May, and afterwards planted out two feet apart, the tops will be ready for use during the latter part of fall; and after

the heads are used up, the stalks should be dug out, and planted close together in a frame, and protected from the severity of winter, air and light being admitted at all favorable opportunities. In this way, the small *buttons* may be cut as wanted, and will furnish many a good dish, far superior to the common drum-head cabbage.

Green Curled, or Siberian Borecole (Scotch Kale).—A very hardy, good flavored, and beautifully curled variety. The head, when well grown, will spread two feet in diameter. The beginning of May is soon enough to sow the seed, and the plants may finally be put out two feet apart. The tops are ready for use through the winter, and, where the climate is very severe, it is best to lay the plants down in the following manner: Remove the soil (about six inches deep) along one side of a row, and close to the stems; afterwards, bend them over into this excavation; they will then lie sideways, with the roots firm in the ground, and as they grow. In opening the next trench, cover the stalks of the former row with the earth taken out of this, and so on over the whole piece. Throw over the tops of any kind of clean haulm, or straw, to keep off the sun's rays when in a frozen state, and the heads may be cut as wanted.

Purple Borecole.—This is a very hardy sort, of a dark purple color. In other respects, similar to the above, and may be treated in the same manner.

Turnip-rooted Borecole.—The stems of this variety have the peculiar property of swelling out laterally, and forming somewhat the shape of a turnip. All parts of the plant are good as food, excepting the underground roots. It answers the double capacity of turnip and borecole, and ought to be more generally cultivated. Treated as the above—only planted some sixteen inches closer—it will be serviceable at the same time.

All the Cabbage tribe will do tolerably well in almost any kind of soil, but are more profitable, and of much better quality, when liberally supplied with fertilizing material. A fresh and somewhat strong, turfy loam, deeply worked, and well drained, with plenty of barnyard manure, or the next best substitute, decayed leaves or swamp muck mixed with guano, will invariably bring the greatest profits, and give the most satisfaction. When well cared for, there is no crop that pays better for the market gardener, while, on the contrary, there is only a meagre return. So much is the difference, in this respect, that one person will realize over five hundred dollars to the acre, while another will not get more than fifty.

Those kinds which are advised to be sown in September for the first early crop, will require protection in winter. This may be accomplished by pricking out the young plants four inches apart, in a cold frame with glass sashes, or a framing of boards and shutters. Whichever may be used, be careful to give abundance of air at all favorable opportunities, but keep close, and in the dark, at all times when the frost is very intense, and the atmosphere bright and clear. The sun's rays striking immediately upon the frosted plants, causes sudden thaw, and often kills them. When the fall sowing has not been attended to, the seed may be sown early in February, on a slight hotbed, and treated as recommended for cauliflowers in a former article, which see.

The insect which infests the Cabbage, is the *fly*—a minute beetle, that jumps like a flea. It attacks the plants in the seed leaf, and continues its ravages until they attain a considerable size. In hot and dry weather, in the summer time, it is most abundant and destructive, but does little harm during the cool season, or when rain is abundant. The best preventive which I have found out, is a dusting of caustic lime, wood ashes, or a light sprinkling of guano, when the dew is on the leaves. In some poor or long-worked soil, the roots and tops become infested with a *glaucous, green Aphis*, which congregates together very numerously. This may be prevented, at the roots, by dipping them in powdered lime before being

planted; and a dusting of the same over the leaves will soon banish them above ground. There is also an ashy-gray caterpillar (the *beet worm* of the Cabbage), that eats through the stems immediately below the surface, and which will sometimes ruin a whole stock of plants when in the most promising condition. In some localities, this is the most formidable pest with which we have to contend, as it works out of sight, and can travel sufficiently under ground to be unperceived. When the plants begin to wilt under the influence of light, examine the base, and it will soon be verified, if the injury is from this cause. If so, where it is applicable, give a good soaking of strong lime-water around the base of each, and where the plot is too large for this method, drop a little lime around the plant, before rain, if possible, that the caustic properties may wash down; for, it is only in such state that it will do any good. The most effectual plan, however, is to apply a liberal dressing of lime when the ground is being worked, which will destroy not only the eggs of this, but of many other insects, if they be deposited there. Few people seem to be aware of the good effects of lime, applied in this way, for ridding the ground of insects; but remember that it should be turned in immediately after being spread, or it soon becomes neutralized, and of no service for this purpose.

STRAWBERRIES.

BY THOMAS MEEHAN, GERMANTOWN, PA.

Your correspondent, "C. Legg, M. D.," has a note in your July number, in reference to Longworth's Prolific Strawberry, in which he hesitates whether or not "to accuse nurserymen of dishonesty and stupidity," because plants he bought for the above from the Clifton Nurseries, bore all pistillate flowers. I can lend him a circumstance to aid him in deciding. During the height of the "strawberry war," my friend, Mr. Longworth, offered to give me a handsome sum if I could convince him that a hermaphrodite variety could be made to produce pistillate flowers, and suggested that I should take his "Prolific" for the experiment, as it was a kind he could readily distinguish by the foliage. I did so, and took plants procured directly from his own garden, to insure their accuracy, and on which, by the by, our Fruit Committee founded their report to our Society, after an examination of these very plants as the veritable "Prolific." To avoid the possibility of mistakes, I potted the plants myself, and attended to them, daily, till they flowered, which many of them did, in pistillate form. I sent specimens to Mr. Longworth at once—plant, flowers, and all—and received word, in reply, that a committee of the Society had pronounced it *not to be the true Prolific.* Since this, I have taken very little part in the "strawberry question," considering that my reputation for accuracy was in danger of being injuriously trifled with. Now that the heat of controversy has passed away, it is gratifying to me to find the views I was so bitterly assailed for maintaining so extensively, strengthening themselves. If your correspondent is desirous of understanding all the bearings of this subject, I would recommend to his perusal a paper on the "strawberry question," by Jas. W. Ward, Esq., inserted in the *Transactions* of the Cincinnati Horticultural Society for 1854, which, though written by the coadjutor of one of my most strenuous opponents, Dr. Warder, contains "my sentiments exactly."

In case your correspondent should not be able to obtain the perusal of this document entire, I beg permission to make a small extract for his information:—

"Now, these characters (stamens and pistils in the same flower) of Fragaria (the Strawberry) are normal and positive, though not constant; they are essential

to the genus, not permanent in the individual. * * Various causes (unknown to science) are constantly occurring to produce imperfections and modifications in the several parts of plants; striking variations from normal conditions are frequently, indeed, so often repeated, as to *assume the appearance* of permanent characters. * * Transformation, as well as the entire suppression of pistils, is also of frequent occurrence. Pistils (says Balfour) are sometimes changed to stamens, and bear pollen. * * Cultivators and other observers of variations from the normal condition in the Strawberry blossom, have described the plant itself as therefore dicœcious. These descriptions convey a notion entirely at variance with all previous knowledge of the characters of the genus, and not only so, but really contrary to their own observations of the plant in its natural state. It is certain, beyond controversy, that the natural character of the perfect Strawberry blossom is hermaphrodite. Any departure from this original typical form must be regarded as casual degeneracies, and BY NO MEANS AS CONSTANT. The more recent advocates of the theory, have claimed for it too much; that is, they have asserted that these abnormalities are fixed and permanent, natural and transmissible."

When the above was written, the author was evidently opposing some one whom he believed to deny the existence of such a thing as a Strawberry blossom with imperfect sexual characters. But as no such persons "came out" in the controversy, it is gratifying to find that, with the exception of Mr. Longworth and the "few who have claimed too much," both "Eastern cultivators" and "Cincinnati" are of the same mind after all.

INSECTS, NO. 2.—ILLUSTRATED.

BY J. STAUFFER, MOUNT JOY, PA.

THOUGH the insects under consideration in this article have been well described and illustrated in the Agricultural Patent Office *Report* for 1854, I nevertheless copy from my own drawings and observations, for the benefit of those of your readers who may not be in possession of said report.

Cut No. 1 represents the Ægeria exitiosa of *Say*, or Peach-tree Borer.

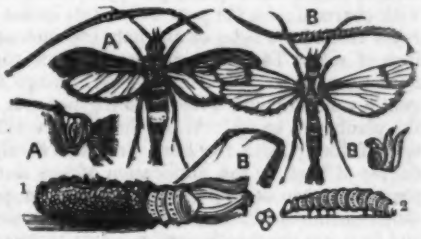
The family Ægeridæ, or the Sesiades of *Latreille*, are interesting, both on account of the difficulties connected with their natural situation among Lepidopterous tribes, and their great resemblance to various Himenoptera and Diptera, owing to the elongate form of the body, and the transparency of the wings.

In their habits and transformations, they approach the Cossus among the Hepialidæ, while the wings and antennæ have a close analogy to some of the clear-winged Sphingidæ.

About the 16th of July, by examining the gummy exudation at the base of peach-trees, you will often find an oblong, oval body like fine tan; this is the cocoon, made from the *débris* of the bark, which incloses the chrysalis and young Ægeria. Place this cocoon in a box—not too close—and, in about nine days thereafter, you may witness, as I have, the mode of egress from its double confinement. The chrysalis, or shell, surrounding the insect, is furnished with transverse rows of short, somewhat curved teeth on the abdominal segments, by means of which it wriggles its body forward (screw fashion) till two-thirds out of the cocoon, when it speedily splits into three segments, through which opening the insect escapes. Moist and rather feeble at first, in less than five minutes it acquires all its strength and activity, and is then truly beautiful to behold, in its pristine vigor and perfection. The female (A) has the anterior wings covered with a velvety, blue-black coat, as also its body, except a broad, yellow ring. The male

(B) has both pair of wings transparent, yellow markings on the thorax, and collar and narrow rings on the abdomen. Both are of a wasp-like appearance. To witness the transformation, affords food for contemplation, and imparts a useful lesson.

Cut No. 1.



Ægeria exitiosa.—Say.

The larva of this beautiful but pernicious insect, is a naked grub, found imbedded in the trunk and roots of the peach and other allied trees, which it often girdles and destroys; hence its specific name *exitiosa*, given by Mr. *Say*, who first described it in Vol. III. *Journ. Acad. Nat. Sci.*, Philadelphia. It has six pectoral, eight ventral, and two anal feet; sixteen altogether. Fig. 1 is the cocoon and chrysalis after the insect has made its exit. Fig. 2, the grub, or larva. The spurred tiffia, and male (B) and female (A) heads, are also figured.

Dr. Harris, in his valuable "Treatise on the Insects of New England injurious to Vegetation," recommends the following remedy:—

"Remove the earth around the base of the tree; crush and destroy the cocoons and borers which may be found in it and under the bark; cover the wounded parts with the common clay composition, and surround the trunk with a strip of sheathing paper eight or nine inches wide, which should extend two inches below the level of the soil, and be secured with strings of matting above. Fresh mortar should then be placed around the root, so as to confine the paper, and prevent access beneath it; and the remaining cavity may be filled with new or unexhausted loam. The operation should be performed in the spring, or during the month of June. In winter, the strings may be removed, and, the following spring, the trees should again be examined for any borers that may have escaped search before, and the protecting applications should be renewed." Coal-ashes, placed around the trunks, in the cavities, instead of mortar, is found useful, and also recommended.

On examining the gummy exudation at the base of a young peach-tree, I found maggot-like white worms imbedded in the bark. Fig. 1, natural size. Under the lens, Fig. 2. It has a pearly-white, transparent color; along the back, an opaque, white line. The first three rings have faint ochrous markings; the head is of a long, rounded, cone-like shape; jaws, short, but strong; no signs of legs. There is a small black bug often found, in spring, among the roots of peach and other fruit-trees; a species of *Saperda*, perhaps. The larvæ are also borers, but I am not certain that the above is the larva, from want of sufficient evidence.

Cut No. 2.

TREATMENT OF THE ACHIMENES.

BY RICHARD REES, GARDENER TO LEWIS ELLSWORTH & CO., NAPIERSVILLE, ILL.

I WOULD offer a few remarks on the cultivation of this most beautiful plant (the Achimenes), of which there are many sorts, viz: Patens coccinea, Rosea grandiflora, Longiflora, &c. To grow them to perfection, it will be necessary to prepare a place suitable for their reception; those who have not the convenience of a hot-

house, may prepare a hotbed for a one-light frame, or more, with a temperature of not less than 60°. Make a compost of one-half sand, and the other half leaf mould, with a small quantity of peat mixed together; let the pots be well drained with charcoal; fill the pots within two inches of the top with compost; place the roots around the sides of the pot (one inch apart), and then cover them with one inch of soil. The bed being ready, place the pots on the surface, or, if there is no danger of the bed being too hot, plunge them up to their rims; give them a gentle watering with a fine watering-pot, put on your lights, and, in a few days, the plants will be up. When the pots are well filled with roots, they must be potted off singly, with the same drainage as above mentioned; keep up a regular degree of heat by the application of hot dung lining a long time, shifting your plants, as often as they need it, into larger pots; syringe them once a day, and shade them immediately, if necessary, from the scorching sun, as shade, moisture, and heat, are the most essential points required to bring this most beautiful specimen of the tropics to perfection. With this treatment, they will show signs of flowering very early, at which time they may be removed to the greenhouse or window, there to mingle with other plants, and enjoy the sun and air freely.

THE ATMOSPHERE.

BY JOHN WATSON, GARDENER, WEST FARMS, WEST CHESTER CO., N. Y.

Dear Sir: I was delighted with the communication of your friend "S," in the July number, and I trust that no consideration will deter him from giving a further account of his experience, no matter how anomalous the facts may appear. Such articles must be interesting to all, and especially so to the young gardener, tending, as they do, to awaken a spirit of inquiry, and to prevent those early-formed prejudices so difficult to eradicate, and so inimical to the true interests of horticulture. But, *apropos* to the remarks of your correspondent, and in support of his opinion, that the atmosphere is *the* storehouse from which plants are fed, allow me to record a very striking circumstance with which I have long been familiar.

An old lady of my acquaintance, in Scotland, is possessed of a relic in the shape of a scarlet geranium, which has been the pride of her parlor window for upwards of thirty years! Every day during that long period, it has received its customary cup of cold spring water, and every summer, without further care, it blooms, and *has* bloomed, most abundantly. But stranger still, and more to the point, is the fact known to all the neighbors, and attested to by the lady herself, that the plant of which I write has stood in the same pot and in the same soil! ever since it came into her possession. In childhood, I have stood at the old lady's window, and wondered how the shining beauty could live, and grow, and blossom, in the hard, dry earth, that seemed to be part and parcel of the same antique vessel which contained it; and since I have become a gardener, the memory of the old geranium has done much to mould my ideas of the natural requirements of plants, and to convince me that however important the constituents of the soil may be, they are not, by any means, "the chief good."

With trifling exceptions, one plain mixture of porous earth is all I have ever used in potting, varying it simply by adding or withholding manure according as the plant is or is not a rapid grower, and I find it to answer the purpose completely.

Trusting that some of our experienced and "knowing ones" will no longer hide their candle under a bushel, but, like friend "S," come forth cheerfully to aid in the world's progress, I am, &c.

[We shall be glad to hear from our correspondent again.—Ed.]

REVIEW.

Villas and Cottages. A Series of Designs, prepared for Execution in the United States. By CALVERT VAUX, Architect (late Downing & Vaux), New York, 1857. Second notice.

HAVING, last month, given a favorable opinion of this elaborate work, we proceed to select from its illustrations two drawings of houses, which appear to be about a fair exhibition of its contents in this particular. The first, is

Design No. 16.—Picturesque Square House.

Perspective View.

"This house, which is the property of Mr. David Moore, of Newburgh, was planned for another party, in the first instance, and was partly executed with the idea that it was to be very simply and economically finished. It was commenced without any intention of constructing the dormer-windows, the projecting hoods, or the covered balcony over the lower bay—all of which, as may be seen on reference to the sketch, help materially to give individuality and completeness to the design. The main outline of the plan is a simple parallelogram, without any break in the walls, and the study may therefore be interesting to those who like a generally picturesque effect in a house, but who wish to avoid irregularities in the internal arrangement, or uneconomical projections in carrying up the brick-work. During the progress of the work the building changed hands, and came into the possession of its present owner, Mr. Moore, and, in accordance with his instructions, the design was improved in many important points. The additions already referred to were made, another bay-window was introduced, the roof to the veranda, also, was curved, and finished with a balustrade."

Further description of interest will give a more correct impression of the interior, but our space does not admit the whole. The cost without mantles, range, or grates, was about $12,000.

Design No. 12.—A Symmetrical Country House.

Perspective View.

"This design was prepared and executed for Mr. W. L. Findlay, in the vicinity of Newburgh, with the exception of the ventilating turret, which was a suggestion made by me at the time the building was erected. This prominent feature has not, however, yet been carried into execution; still, it really forms an integral part of the design, and as the composition would seem to be somewhat unfairly represented without it, it is introduced in the sketch. It can be added, at any time, for $70 or $80. There were some special requirements made by the proprietor, in this instance, that are, perhaps, with some readers, calculated to give additional interest to this plan. The house, during the summer months, was to be, to all intents and purposes, a Southern house; ample circulation of air was to be provided, with plenty of veranda space; and a cool, open arrangement of rooms was especially asked for, as the house would be required to accommodate agreeably many residents and visitors during the hot weather. On the other hand, the plan was to be so arranged that, during the colder part of the year, the house should be suited to the changed needs of its fewer inmates; for it was the intention of Mr. Findlay to occupy his residence all the year round. A completely fitted up and somewhat decorative principal floor, was also a point of importance with the proprietor, who did not propose to expend any large amount on his house, and whose instructions were for rooms of but moderate size, and for a basement kitchen, so as to avoid the extra expense of a kitchen wing. In the plan, it will be observed that a brick porch, connecting two verandas, and forming with them one continuous piazza, opens on to the principal hall, which is 14 by 18. This hall communicates, by sliding doors, with the drawing-room on one side, and the dining-room on the other. Each of these rooms has a bay-window at the end opposite the hall entrance, and thus, when the doors are thrown open

in summer, an agreeable vista effect is produced, and a free circulation of air is provided for. The upper end of the hall is traversed by a light, ornamental, open, arched screen, which is introduced so as to give a definite character to a passage-way, or vestibule, as shown on the plan. Beyond this arched screen is an entrance, with sliding-doors, to the library, and at the opposite end of the latter room is a large, square bay-window, with open screen-work and seat in connection with it. Thus another extensive vista is obtained, in summer evenings, through the house in this direction, and when the doors are open, any one sitting in the library bay can see the river view framed, as it were, in the outer arch of the porch. A little boudoir, or ladies' morning-room, with a private veranda entirely shaded during the whole of the forenoon, is planned close to this library and to the drawing-room, and a similar space is inclosed on the opposite side of the house for water-closet and pantry, which has a lift in connection with the floor below. It will thus be seen, by an inspection of the plan, that it would hardly be possible to have a more airy and open arrangement for summer; for, standing in the hall when the rooms are thrown open, one can see clear through the house, north, south, east, and west; and the porch, hall, vestibule, library, dining-room, drawing-room, and veranda, are converted, as it were, into one connected apartment. All idea of the moderate size of the single-rooms (the largest of which is but 18 by 20), is thus done away with, and the house necessarily seems roomy, open, and ample in its accommodation.

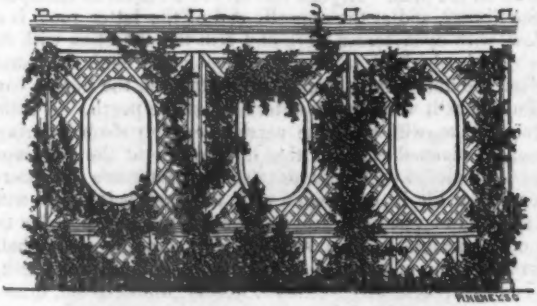
"So much for the summer arrangement. In winter, on the other hand, the first step should be to inclose the arches of the porch with glazed frames, and the next, to close the sliding doors for the season, entering, in future, each of the separate rooms from the ordinary-sized doors which are provided to each of the principal apartments for this purpose; the library being approached through a book-case door, already illustrated and described in the opening chapter. The furnace may then be started, and the house will be found to be a warm winter house, suited to a severe climate. All the thorough draughts are shut off, and the separate rooms are small, readily warmed, and easy of access from the chambers. The bedroom floor in this house contains an upper hall, lighted by a sky-light, four full-sized bedrooms, a dressing-room, and a bath-room, with water-closet. The attic contains two spare bedrooms, shut off entirely from the apartments for domestics, on the same floor, and it also provides an open hall, two servants' bedrooms, a garret, and lumber-room.

"In the basement will be found the kitchen, wash-room, milk-room, furnace-room, and cellars. The carpenter's and mason's contracts for this house were taken at $7,230, and the painter's, and plumber's, and decorator's accounts, with some ornamental ceilings, and other carpenter's work inside the house, not contemplated in the original contract, made the amount expended, and on which five per cent. (architect's commission) was charged, $9,326 51."

Design for a partially inclosed Veranda.—The work is very prettily embellished with vignettes and tail-pieces appropriate to the topics discussed. We do not know that we can select a better one than the following:—

"The vignette shows a design for partially inclosing a veranda which was made for J. J. Monell, Esq. The country house to which it belongs is planned on a side hill overlooking a picturesque glen; and the kitchen in the basement being, in consequence, entirely out of ground in the rear facing the garden, these offices were somewhat too freely exposed to view from the ornamental grounds in the vicinity of the house. The simple plan here sketched was, therefore, made and carried out; and as the vines (already grown over the old supporting-posts) were trained to the new trellis-work, and showed to even better advantage than before,

no harm was done in this respect, while a greater degree of privacy was certainly arrived at with but little sacrifice of light. The sketch is introduced as similar cases often occur, and a little ingenuity can readily arrange new varieties of pattern to embody the same general idea."



Design for a partially inclosed Veranda.

With these illustrations to complete our notice, we conclude our remarks on a work which exhibits much careful study and thought, and one that cannot fail to do credit to the author, who will be the means of embellishing many an American site.

Dr. Gray's First Lessons in Botany.—The London *Athenæum*, which never spares a fling at American authorship when it dares to be caustic, speaks in the highest terms of the author as "one of the most accomplished and sensible cultivators of botanical science now living," and "the most distinguished botanist of the United States." Of the book: "We cordially recommend these *Lessons in Botany* as the best work with which we are acquainted for the use of those who are commencing the study of that charming science."

Trees, and their Uses.—That dear old periodical, the *North American Review*, astonishes the world, every three or four months, with news of an extraordinary kind, in which all that is known is ignored. We beg to place side by side the following:—

From the North American Review, July, 1857.

"The translation of Michaux's great work has quite disappeared. Nuttall's valuable *Supplement to Michaux* (a most curious monument of persevering zeal and enterprise) is now exceedingly rare, &c. &c. &c."

From the Horticulturist, September, 1857.

The translation of Michaux's great work has just reached its fourth American edition. Nuttall's valuable *Supplement* is now published with Michaux, and sells as fast as it can be manufactured.

A Scottish Pansy Society holds regular exhibitions, and gives premiums with all the gravity of more important concerns. Pot culture under glass is the most certain means of bringing out the many fine points of the Pansy; smoothness is one great *desideratum*, size being the last point. Average-sized bloom, colors bright, and well defined, of perfect shape, edge, and smoothness, are the considerations with the judges. A Royal National Tulip Show is also an English attraction. Four thousand five hundred dollars were distributed as prizes at the late Crystal Palace Grand Floral Exhibition.

FOREIGN NOTICES.

MOISTURE FOR ORCHIDACEOUS PLANTS.—The *Gardener's Chronicle* notices the following curious speculation: "We observe in a late number of the *Revue Horticole*, a statement by Mons. Duchartre that Orchidaceous epiphytes are incapable of feeding upon moisture suspended in the air as invisible vapor. He says that experiment has satisfied him that this common idea is completely erroneous, and that they feed wholly upon the mere water which, in a fluid state, comes in contact with their leaves and roots. A damp atmosphere, according to this observer, furnishes absolutely nothing in the shape of food, and can have no effect upon them, except diminishing perspiration, which might be excessive if the air in which they live were to become too dry.

"M. Duchartre asserts that copious watering and syringing, especially upon the roots, are what such orchids want. In their natural situations, they receive it abundantly in the form of rain; and in our houses they must also have it, if they are to thrive. We are unacquainted with the detailed experiments which have led to these conclusions, in the justice of which we are not at present prepared to acquiesce. The statement is, however, important, and cultivators should look to it. Maybe it throws some light upon the mysterious disease that has appeared in our orchid houses of late. While, however, we pause to hear more of M. Duchartre, we admit at once that the skin of orchids is much in need of very careful examination. What, for example, are the innumerable papillæ (one to each cell) which characterize the upper surface of the leaves of such plants as phalænopsis?"

HYBRIDIZING. LORD BACON.—There is no evidence that hybridization (or crossing the sexes of plants of the same genera together, to produce new varieties in the progeny) was known to the nations of antiquity, although grafting and inarching was commonly known and practised, by the Romans at least. On the contrary, that great philosopher, Lord Bacon, informs us that the "compounding or mixture of kinds of plants is not found out, which, nevertheless, if it be possible, is more at command than that of living creatures; wherefore, it was one of the *most notable experiments touching plants to find it out*, for so you may yet have great variety of *new fruits and flowers yet unknown*." Quite right, as we of this generation know full well; and we see how clearly he foresaw (two hundred and fifty years ago) the results which would follow the "notable experiments" he suggested; "for," added he, "grafting does it not; that mendeth the fruit, or doubleth the flowers, but it hath not the power to make a *new kind*, for the scion overruleth the stock."

A FEW THINGS WHICH EVERYBODY OUGHT TO KNOW.—A quart of peas, sown in a shallow box fifteen inches wide by eighteen long, at any time of the year, and cut off when about four or five inches high, and boiled like spinach, with a little salt, makes a most delicious dish. The tops of Jerusalem artichokes, cut off about six inches long, and boiled like other greens, make a capital dish, which partakes, in some degree, of the flavor of the root. Boiled water-cress also makes a wholesome and delicious dish. It must not, however, be over-boiled; for im-

paired constitutions, it is invaluable. In April and May, late potatoes should always be peeled some ten or twelve hours, and steeped in cold spring water before they are cooked. This is a great improvement; it makes the potato nearly as good as those dug in October. The proper way to make a cup of good tea, is a matter of some importance. The plan which I have practised for these twelve months is this: The tea-pot is at once filled up with boiling water; then the tea is put into the pot, and is allowed to stand for five minutes before it is used; the leaves gradually absorb the water, and as gradually sink to the bottom. The result is, that the tea leaves are not scalded, as they are when boiling water is poured over them, and you get all the true flavor of the tea. In truth, much less tea is required in this way than under the old and common practice.—*James Cuthill, London.*

Mr. Bateman's idea—doubtless the only one—of a pinetum is a most irregular series of groups of the same or kindred species of conifers; and he has placed them on mounds, for the double purpose of rendering these groups more picturesque, and of bringing the beautiful forms of many of the sorts between the spectator and the sky, without any intervening background. The great variety in the shape and height of the mounds, likewise affords the best facilities for securing the precise amount of exposure, shelter, shade, moisture, or dryness, which any particular species may demand. And the carpet of Heather, by its color, and by its naturalness, seems to transfer the plants at once, in appearance, to their native hills, while, unlike bare earth or grass, it requires no labor or attention whatever to preserve it in good order.

Comparatively recent as is the formation of this pinetum, and though the plants are none of them much more than ten or twelve feet high, the difference between the system of grouping here pursued, and the common method of spotting about the plants at comparatively regular intervals on a flat surface, is most conspicuous and satisfying. Nothing of the kind could be more beautiful than the groups of deodars and araucarias (at least a dozen plants in each group) which burst into view as the pinetum walk is entered. Occupying a slope to the west, and assuming the greatest diversity of character, with some of them standing out clear against the sky, and others (especially the deodars) being backed up by the mounds themselves, or by yew-trees planted behind them, they present themselves, even to those most conversant with their forms, in many novel aspects and combinations. So striking, indeed, is the difference of habit which the araucarias assume, that some fanciful name, indicative of their character, has been applied to each individual plant.—*Cottage Gardener.*

Melons in Persia are treated with the greatest attention. In the best gardens, they are placed on tiles, and turned round several times a day, in order that each side may ripen equally in the heat of the sun. The result is, that they probably excel in flavor any melons in the world. They are esteemed a great delicacy in Persia, and are sent as presents not only to the cities of the interior, but even to Bagdad and the holy places of Kerbela and Nedjef in Arabia. Unlike the Turks, who dine from off a circular tray raised upon a stool, and upon which one dish at a time is served, the Persians place all their dishes together upon a cloth spread over the floor. Those who eat crouch around upon their hams (a position particularly disagreeable and inconvenient), painful, at all times, to Europeans with tight "continuations," but unbearably so when accompanied by the process of lifting rice with one's fingers to one's mouth. At great festivals, the floor of the room is frequently covered with dishes, and the servants thread their way,

generally with naked feet, through a forest of pillaws, soups, sweets, bowls of sour milk, sherbets, and candlesticks, which they do with considerable skill, waiting upon the guests without treading in the plates, or sweeping away their contents with their long flowing garments. During the feast, the company are entertained by the shrill and discordant notes of boys, who sing alternately verses from the poets, and are accompanied by a musical instrument consisting of many strings, struck with a hammer. Wine and ardent spirits are always taken by Persians and Turks before dinner, and not during or after a meal. It is considered more wholesome and agreeable to get drunk before eating, and an Eastern never drinks without the intention of doing so to excess. He cannot understand the habit of taking wine in small quantities as a simple stimulant. There is one invariable accompaniment to all Persian dinners: a bowl of sugar and water, which is drunk with a wooden spoon, frequently of very elegant shape, and of such extreme delicacy, that, when used, it bends almost double.

M. Pepin, of the Garden of Plants, has a note on the effects of sulphur on camellias, and other kinds of house plants, to show that, though sulphur may be good for vines and peaches, there is danger in using it for other plants in the same manner. He mentions an instance in which the gardener of a gentleman residing in Paris had applied it, in the month of October, to young camellias covered with insects, thinking, as it is stated, that by this plan he would get rid of them in the same way as those on the peaches treated for blight in the open ground. But as the conditions were very different, the results were not the same. It appears that the camellias in question, about fifty in number, were from three to six feet high, planted out in clumps *en espaliers;* some of them only were in pots. Those in the clumps were trained in the pyramidal form, and the others in the fan form along the walls of the house. The borders of the clumps were filled with miscellaneous plants, having a margin of *Lycopodium Braziliense.* Shelves running round the house were filled in the same way.

The sulphur was applied in the evening, and, next morning, the ground was covered with camellia buds. Some days after, the young branches were affected seriously, and, subsequently, the whole of the wood down to the very roots, so that, with the exception of *Donkelaerii, mutabilis, Chandlerii,* and *elegans,* the whole of the camellias died. Among the ligneous plants saved, the principal are a *Ficus elastica,* about seven feet high; the buds and terminal leaves, however, have been much affected. With this were a *Dracæna australis,* and some varieties of *Epiphyllum Ackermanni.* It appears that the lycopodium which formed the margin, twenty-five varieties of azalea in pots, a collection of heaths, *Habrothamnus elegans, Clematis japonica, Passiflora Belotii, Daphne indica,* and more than a hundred other plants of similar kinds, have been destroyed by the sulphurous vapor which was produced, during the night, in the house.

M. Pepin observes that, as is well known, sulphur is used, in many cases, for plants in stoves and greenhouses; but it is necessary to understand the nature of the insect, and the plants to be operated on. Great caution must be used, also, as to the quantity of sulphur proper to be employed, as well as the particular parts to be operated on. It must not be supposed that sulphur may be used as freely in a house as in the open ground.

The Moutan Pæonies.—When Mr. Fortune visited China, on the service of the Horticultural Society, the acquisition of new Moutans was one of the first objects to which he attended. In his *Wanderings,* he mentions the beauty of the varieties seen by him at Shanghai; how he heard of yellow, and purple, and blue

sorts; and at one time saw lilacs and purples, some nearly black; at another, dark purples, lilacs, and deep red. Afterwards, having discovered that these things came from a place only six or eight miles from Shanghai, Mr. Fortune tells us that he proceeded there daily during the time the different plants were coming into bloom, and secured some most striking and beautiful kinds. The name *Moutan* seems to be an alteration of the word *Botan*, the usual name of these plants in Japan, as we are told by Kæmpfer. The Japanese seem to think the Moutan and Pæony distinct genera. It is to be suspected that more species than one is comprehended under the common name of Tree Pæony, even although, as is probable, the Poppy Moutan (*P. papaveracea*) should be a mere variety of the common kind; for some of the Japanese kinds are said to form rapidly a woody stem eight or ten feet high—a stature which the common Moutans would only gain after many years in even favorable climates. The Chinese and Japanese are said to reckon their varieties of Moutans by hundreds, as we do our roses. It is not improbable (now that the single and very slightly double kinds are beginning to establish themselves in Europe), that we, too, shall have the same dominion over them as over camellias and chrysanthemums.

The Sweet William.—This is a very sweet flower, and carries an immense truss of bloom; it is a favorite of mine, but I have sought in vain to obtain a plant, or even a pinch of seed of Mr. Hunt's far-famed varieties. So anxious was I to see the flowers so highly extolled, that I used the freedom of writing Mr. H., and requested him to favor me, for love or money, with a pinch of his fine seed; but he took no notice of my humble request, which I thought very strange indeed of an Englishman, who, like the French, are so far-famed for frankness and politeness. I had, last season, a seedling—a very fine dark flower, with every good property, which I crossed with one of a much brighter hue (also a seedling), and to perform the cross, I watched each flower as it opened (the truss being covered with glass), and extracted very gently, with my pincers, all the little trembling anthers, then examined the pollen flower for farina, and, when ripe, took the pip entirely off, and extracted the stigma, and shook it over the pistil of the mother plant; and so, day by day, with all the flowers I cross-bred last season. I have done my best in offering to the young florist every iota of my practice, and if it should be the means of improving men and floriculture, for time and trouble I shall be well remunerated.—J. C.

Culture of the Rose.—People now begin to be their own rose makers. A few stocks set them up. These are to be procured, at the right season, at any of the nurseries, and when their roots are nicely pruned, and they are planted in the ground, the same as established trees would be, they have nothing to do but keep them watered now and then, until they grow, when all the side shoots down the stem must be rubbed off, except the strongest two near the top, or the strongest near the top of the growing part; and having selected the one that is strongest, cut down the stock to an inch above it, that all the strength may be thrown into that and the nearest one below it; for it is on this one strong shoot that we must bud, and that will be ready about the beginning of July. If we have any roses in the garden that are inferior, and we wish to change them for better sorts, all the head should be cut away, but two or three of the strongest shoots, close to the stock. These will grow, by the end of July, strong enough to bud upon, and may be treated just the same as a stock would be treated; but let no side shoots, nor any other shoots grow at all, and when the new growth shows for bloom, pull off the buds, and let none go to flower.—*Midland Florist.*

EDITORS TABLE.

THE COMING AUTUMN.—With a good harvest gathered, our spirited gardeners are looking forward to the ripening of fruits, and the consequent conventions, exhibitions, and shows, to test the excellence of our products no less than the ability, and talent, and industry of the growers. The officers, &c., of the various societies throughout the country, will confer a favor on our readers by forwarding to the Editor of the *Horticulturist* all proceedings and reports at as early a day as possible.

The *Horticulturist* is looked to for reports of all useful novelties, and has, so far, not disappointed expectation, as is proved by its extending circulation, and the most unequivocal marks of approbation from all quarters of the Union.

THE SEASON.—The period of active industry among nurserymen and florists rapidly approaches. Already the note of preparation is heard in the flow of advertisements, which enhance the interest of our publication, and which begin to crowd upon the printer from every point of the compass. We have no objection to make to those who read these evidences of business tact before they peruse the regular columns of the *Horticulturist*, for they tell the story of what is going on in the busy gardens of those who minister so largely to the pleasure of the public, by assisting to adorn our rural homes. As usual at this season, the advertisements exhibit the commendable industry of the advertisers, and detail their various specialities. It would be well to remember that no one can do a large business who has not something to sell; the season is coming (or come) to collect the seeds for another year, and all who neglect this duty, enhance the value of what their more careful compeers accomplish.

As a season, this has, generally, been a bountiful one. Had it not been thus, there is no telling where our extravagance and reckless importations of gew-gaws might have landed our ticklish banking system.

Of fruit, we have a good report to make. Peaches, if not abundant, will prove an average crop; pears never were more abundant; apples, not so plenty. The crop of potatoes gives fair promises, and, it may be hoped enough food will be laid up for the winter in every section of the country, to prevent the cry of famine heard in some places the past winter.

The season has been particularly propitious to the lovers or fine lawns; successive rains, too, have made weeds a prominent object in too many places; but, on the whole, we meet nothing but smiling faces among gardeners and farmers.

ANOTHER STEP.—The jurors at a recent cattle show at Poissy (France) made another step towards testing the value of the animals; after the weight had been ascertained, the jury were entertained at a dinner, where portions of the various prize animals were served up, to test which breeds give the best quality of meat; the time taken to get it ready, the weight before and after cooking, were all observed with minuteness. It was found that the flesh of certain breeds was better adapted to boiling, and others for roasting. There was a trial

of soups, and a trial of roast pork, roast mutton, roast beef. Between each trial, the jurors ate fish, fowls, sweet breads, and vegetables, so that history will be apt to record that the judges had rather a large dinner. It seems to us a sensible proceeding thus to enter into the facts as regards the utility and nourishing qualities rather than the mere fatness; and to such trials must our great fairs come at last.

HOVEY'S *Magazine* for August, contains an excellent article on the gathering and keeping of early pears, in which it is said that no summer pear should be allowed to ripen on the tree. The fruit, as soon as it has attained its growth, should be picked; this may be ascertained by the change which takes place in the appearance of the fruit. Some of the defective specimens will turn yellow and drop, while the others will assume a smoother and paler surface; the coloring on the sunny side will be brighter, and the stem will become swollen, particularly at the junction with the tree. These indicate that the period of maturity is approaching, and the fruit may be gathered and ripened.

NATIVE GRAPE-VINES.—The Commissioner of Patents has sent an agent to Arkansas and Texas, and the neighboring Territories, to select cuttings of the native grape-vines, and gather information relative to their adaptation to the soil and climate of other parts of the United States.

ACCURATE EXPERIMENTS have been made in Illinois, to test the comparative value of timothy and clover hay. The experiments were carried on for two years, and the results were that the clover hay uniformly yielded ten per cent. more milk than the timothy.

SILK FROM A NEW SOURCE.—It is seriously asserted in the *Trieste Zeitung*, that M. Cavezzali, of Lodi, has succeeded in procuring silk from mulberry leaves. The silkworm is henceforth to remain undisturbed in what Gibbon calls its "golden tomb;" and that may prove sober fact which Waller wrote as a flight of fancy: that "without the worm, in Persian silks we shine."

A NEW INVENTION has been brought forward at Marseilles, France, for preparing flour by a chemical process, a great deal finer than by grinding. A sample of the flour has been sent to the Academy of Sciences in Paris, to report upon.

THE State of Ohio counts among her honors that she opened the first female college; introduced, or, rather, created the culture of the grape in America; discovered the true method of taking, magnetically, the ascension and declension of stars; invented the steam fire-engine; and gave birth to a noble series of painters, poets, sculptors, and men of science.

SULPHUR.—A correspondent calls attention to the subject of the use of sulphur for the cure of the European vine disease, and requests the publication of the following from the London *Times*, just received: "The French Society *d'Encouragement pour l'Industrie Nationale* has reported to the French Government that the prize of 10,000f. offered by the French Government in conjunction with the Society, is jointly due, 1st, to Mr. Kyle, an English horticulturist, who first applied sulphur to this purpose in 1848; 2d, to M. Duchartre, Professor of Agronomy at Versailles, who first introduced the method in France; 3d, to M. Gontier, a horticulturist at Montrouge, near Paris, who was the first to apply it on a large scale; and 4th, to M. Henry Marès, Secretary to the Society of Agriculture of the Department of the Hérault, who, by numerous experiments, has proved the superiority of sulphur over all other agents previously tried, and pointed out the surest and most economical way

of applying it. Moreover, that M. Marès has won the prize of 3,000f. proposed by the Society for the best essay on the nature of the malady which has attacked the vine for so many years. The report concludes with proposing prizes of encouragement of 1,000f. each to MM. Camille Leroy and Kopezinski, and of 500f. each to MM. Berkeley, Chancel, Gaudry, Hardy, Money, and Bonnel, for their laudable efforts towards effecting the object in question. We may possibly offer some observations upon this subject on a future occasion."

Dicentra.—In the "Foreign Notices" last month, occurred the synonyme of *Diervilla* for Dielytra spectabilis. It was, no doubt, a slip of memory on the part of the paper from which we copied; it should be *Dicentra*.

Camellias.—S. Feast & Son inform us that the Camellias, "Feast's Perfection" and "Triumph of Baltimore," were originated by themselves, and that they did not purchase any of this tribe of plants at Dr. Edmondson's sale. Mr. Feast has hopes that he is in possession of a fine perpetual strawberry.

A Diving Bell that is entirely independent of suspension, its movements dependent on the will of those within it, has excited much interest abroad; it is perfectly safe, and capable of lifting enormous weights.

A New Cement of great value has been obtained by melting together, in an iron vessel, two parts, by weight, of common pitch with one part of gutta percha. It forms a homogeneous fluid, which is much more manageable for many useful purposes than gutta percha alone.

Gossip.—A grape grower in France has succeeded in destroying the oidium by burning sulphur under his trellis once a week, and thus obtained a noble crop of grapes, while those around him had very few. One difficulty encountered in the application of any remedy in the wine countries, arises from the sluggish habits of the peasants, and another from religious scruples, as if any exertions of their own out of the ordinary course, interfered with the dispensations of Providence.——M. Bourgeois presented to the Imperial and Central Society of Agriculture some shoots of a vine, as the result of numerous experiments which he had made with respect to ringing, and which he stated had been completely successful as regards the improvement of the grapes, the berries of which became larger, and ripened earlier in consequence of the operation. According to him, this experiment is of great importance, especially in cold, moist, and late situations in the neighborhood of Paris, where, last year, the grapes did not ripen well. He also states that it prevents the berries from dropping off. Some members of the Society thought that the operation would have no effect upon the grapes situated below the incision, and others believed that ringing weakens the plant.——The wild carrot makes good pegs for verbenas and petunias.——In the Champs Elysées, this season, there are some trees which present an odd appearance. They are good sized young horsechestnuts, which were planted this spring, when in leaf. They are alive, but seem not yet to have a hold on the soil enough to supply the exhaustion of evaporation. Accordingly, the trunks are bound round with canvas inclosing a quantity of moss. At the top of this, the stem is surrounded by a funnel-shaped piece of zinc, doubtless to facilitate the moistening of the moss.——A very good result would be produced, if the crest or crown of the white thorn could be grafted with the crimson; the force of contrast would be surprising and effective; or the white on the crimson would be equally beautiful. This may be readily carried into effect on the lawns or pleasure-grounds, where the trees would be safe, which they would scarcely be in more exposed situations.——A second edition of

Mr. Baker's *Rifle and Hound in Ceylon* (with woodcuts), has just appeared. Those who have read the author's very interesting *Eight Years' Wanderings in Ceylon*, will gladly make acquaintance with the little London volume; those who now read the latter, will be anxious to see the former. The *Rifle and Hound* is a sportsman's book, full of hunting adventures, advice about guns, and stalking, and camping out; and of the way to make hunters war upon elephants, deer, bulls, boars, and bears.——Some of the reeds of Brazil, called Taquarussa, are living fountains; they grow from forty to fifty feet high, with a diameter of six inches, form thorny, impenetrable thickets, and are exceedingly grateful to hunters; for, on cutting off such a reed below a joint, the stem of the younger shoots is found to be full of a cool liquid, which quenches the most burning thirst.——The floor-matting so much employed in America, is made from a reed (Papyrus corymbosus). Another reed helps much to protect the banks of the Ganges from the rapidity of the stream, and the force of the tides; it is the Cyperus inundatus, and should be tried on our Western rivers—as, in Holland, the Carex arenaria is carefully planted on the dikes, where its far extending roots, by mutually interlacing with each other, fix the sand, and give strength to the embankment. ——The Cyperus hydra (called Nut-Grass in the West Indies) is a pest, overrunning sugar plantations, and rendering them barren.——The latest adaptation of India-rubber, is to inclose a strip in wood in the form of a great lead-pencil, when it makes a most convenient article to rub out lead marks on paper. It is sold in this form, very generally, by stationers.—— In its wild state, the pine-apple, when unripe, is so excessively acid as to burn the gums of the mouth; it is then employed, in the West Indies, to destroy intestinal worms.——The tuberose emits its scent most strongly after sunset, and has been observed, on a sultry evening, after thunder, when the atmosphere was highly charged with electric fluid, to dart small sparks, or scintillations of lucid flame, in great abundance, from such of its flowers as were fading.——A good gardener asserts that he has found "well kept" was synonymous with "easy kept," and that, with plants as with other things, "a stitch in time saves nine." ——The Pistol plant is thus alluded to in the Sydney *Morning Herald:* "A hothouse plant, *Pilea alitrichoides*, of tender, brittle, and juicy aspect, looking as if good to eat in a cooling salad, is really of so explosive a temperament that it might fairly be called the Pistol plant. When near flowering, and with its buds ready to open, if the plant is either dipped in water or abundantly watered, each bud will explode successively, keeping up a mimic Sebastopol bombardment, sending forth a puff of smoke, or of dusty pollen, as its stamens suddenly start forth to take their place and form a cross. It is an amusing toy."——The Squills (Scillæ) make excellent edgings of bulbs, and are too little known among us.——Cherries of good kinds were readily retailed, the past season, at ten and twelve cents the pound. The wet spring had injured the crop.——M. Millon, an Algerian colonist, according to a report by M. Payen to the Central Agricultural Society of France, has found in the thornless species of Cactus a valuable food for cattle in Algeria, because it supplies the want of green fodder during the season which, from the month of June forwards, burns and destroys every sort of herbaceous vegetation which cannot be continually watered or irrigated.——An application of sulphur is thus described in the *Gardeners' Chronicle:* "I had before applied sulphur in various ways, and this year I only mixed up such a quantity in water as would freely pass through a Read's hand syringe, and dashed it freely on the glass above the vines. The sulphur adhered to the glass and dried on, but, in windy weather, is partially detached in fine powder, and falling on the leaves, keeps them under the continued influence of its effects; and certainly a cleaner and more healthy foliage cannot be desired. I may mention that a Black Hamburg recently introduced, began early to show symptoms of mildew, but entirely recovered, and has not since been unhealthy."——The Wistaria vines are the best runners to cover unsightly trees that are needed to remain in your grounds from any cause.——Many classes of herbaceous plants continue to brave the rigors of the winter,

covered with a cold and bright mantle of snow; of these species which survive the winter, some are biennial, and others perennial; and, with respect to the former species, though their life may be prolonged by transplanting them, and thus retarding the period of their flowering and bearing seed, yet no artificial means can prevent their decay, after they have provided for the future propagation of their species, by exercising this important function:—

"He marks the bounds which winter may not pass,
And blunts his pointed fury; in its case,
Russet and rude, folds up the tender germ
Uninjured, with inimitable art;
And, ere one flowery season fades and dies,
Designs the blooming wonders of the next."

——Certain fungi are believed to be connected with the process of fermentation. The curious circumstance that, in certain bake-houses, all the bread becomes ropy, and though sometimes prevented from assuming this condition by repeated washings of the walls and floor with chloride of lime, the evil is occasionally so obstinate as to prove the ruin of the establishment, is probably dependent on this cause. Dutrochet believes that he witnessed the growth of a Penicillium from the globules of milk.——We talk of, and admire very properly, the beautiful flowers of the air-plants grown in greenhouses, forgetting that nothing can be more varied than the common lichens which grow so profusely on our fence rails, rocks, and elsewhere, deriving their nourishment from the air, and assuming most curious hygrometrical variations—some, of the richest golden yellow, others with tiny goblets, the borders studded with crimson shields. In the tropics, they lay hold of evergreen leaves; their chosen climate is one that is temperate and moist; aspects to the north or west are their favorite resort, for they shun the rays of the noontide sun. They are met with to the limits of eternal snow. With a good microscope, a student might pass his life in their study alone.——From kelp (the product of a sea-weed) a useful article for the soap-boiler and glass-maker is produced, and sea-wracks (as they are called) thus take their place among valuable vegetation; their soda makes useful manures, and in medicine they are occasionally employed. Their medical value seems to be owing to the presence of iodine, which is known to be a powerful remedy in cases of goitre, &c. The burnt sponge formerly administered, probably owed its efficacy to the iodine it contained; and it is a curious fact, that the stems of a sea-weed are sold in the shops, and chewed by the inhabitants of South America wherever goitre is prevalent, for the same purpose. This remedy is termed by them, Palo-coto (literally, Goitre-stick).——Fungi, including mushrooms, have engaged the attention of various naturalists; they are important either as food or as poison, or as parasites destructive of plants on which they grow. As food, the most valuable are the Agaricus campestris, or common Mushroom, the various species of Helvella, or Morel, and the Truffle; but a considerable number of other kinds are used as food in various parts of the world, of which a useful account will be found in De Candolle's excellent *Essai sur les Propriétés des Plantes;* Persoon, Greville, and other authors, have found them a prolific topic. The decay of fruit appears, in a great measure, to be produced by them. The Rhizomorpha (a spurious genus) vegetates in dark mines, far from the light of day, and is remarkable for its phosphorescent properties. In the coal mines in Saxony, the species are described as giving those places the air of an enchanted castle; the roof, walls, and pillars, are entirely covered with them, their beautiful light almost dazzling the eye, the light increasing with the temperature of the mine.——Dr. Gray says, in one of his essays, "no idea is more fallacious than that those who know a little of a science may be qualified to write elementary books for those who know nothing. Those who have but a pittance of scientific knowledge had best give God thanks, and make no boast of it; and as for their writing, let that appear when there is no need of such vanity."——Mr. Bateham gives a slashing review of Hooper's Fruit

Book in the Ohio Cultivator; to this the editor adds the following: "NOTE. Bro. Bateham puts it to Father Hooper right strong. We fear he has struck a hollow tooth into a crab or persimmon, lately, that makes him write so savagely."

STRAWBERRIES IN IOWA.—The Ohio *Cultivator* says: "Robert Seevers was one of our pomological correspondents some years ago, in Coshocton Co., from whence he removed to Iowa about five years since. We see, by the Oskaloosa *Herald*, that he is still raising fruit, as set forth in the following statement: 'The ground occupied was fifty-nine feet long by fourteen wide. He has gathered from this patch of vines, the present season, *one hundred and fifty-two quarts*, or four bushels and three pecks of berries. At this rate, the yield per acre would be *two hundred and thirty-two bushels*. Mr. S. sold his crop at twenty cents per quart. An acre of ground planted in strawberries, would bring to the owner, at this rate, eight hundred and forty-four dollars and eight cents, in one season. Mr. Seevers is pretty extensively engaged in this branch of business. The above yield is from 'McAvoy's Superior' plants.'"

SHRUBS WITH ORNAMENTAL BERRIES.—A friend has kindly written to me, to point out an error in my paper on the above subject, which I hope you will give me the opportunity to correct. In treating of *Gaultheria shallon* and *G. procumbens*, the sentence reads as if both had black berries. The G. procumbens has red berries. This is well known as the Teaberry (a name also given, in many parts of Pennsylvania, to the fruit of Mitchella repens), and as an ingredient in many varieties of tooth paste, powders, and washes, and as coloring matter for Swaim's Panacea, and a flavoring article for other so-called "remedies," is extensively known.

Rhus *coriaria* should read R. glabrum. I have seen what I take to be a form of R. glabrum, though differing in the form of the panicle, time of flowering, and shape of the leaves, and which I consider to be the *R. elegans* of English gardens, that always bears male flowers; as this does not, of course, bear berries, those who wish to cultivate the R. glabrum for its fruit, must take care to get the proper variety.

A lady correspondent further complains that I have neglected to include in my list the *Daphne mezereum*, which she justly considers equal in beauty with its scarlet berries to anything I have described. At the moment of writing, I had on my mind that it was not hardy enough to be included; but as it is certainly hardier than some I have described (especially Cerasus Caroliniensis and Callicarpa Americana, which, as my friend first alluded to observes, in his letter, he has "scarcely been able to get to live over a Pennsylvanian winter"), I have no excuse to offer my fair friend for the omission. THOS. MEEHAN.

THE CHURCH PEAR.—Some one has been good enough to show me a scrap of the *Rural New Yorker* respecting the Church Pear, pretending that it was not a seedling but a Bergamot, known in Flushing, if I remember, and much like it. I had no occasion to compare the wood or the fruit, but that the *Church*-tree is an original seedling, I have not the least doubt. Why should that old tree be the only one of that Flushing variety grafted sixty or seventy years ago in New Rochelle, among scores of old, *all of them wild* pear-trees, either of the same age, or thereabout? There would be another tree grafted with that variety, if it was so much esteemed as to have attracted notice over Long Island Sound; this would seem a natural proceeding, but no grafts were made. Moreover, the original Church bears no mark of ever having been grafted.

I asked Mr. Carpenter to take up a piece of the root, which I shall plant, and if the foliage should prove different from the large parent tree, I shall give up my opinion, in which I have no interest. Till then, I think the large, fine Church-tree to be as original a seedling as I ever saw before. The close resemblance of both fruits is no proof to the contrary;

hybridization is the general law with apple, pear, and other seedlings, but it is not such a stringent law as to admit of no exceptions. I have witnessed several reproductions identical with the parent seed, and if it was proved to me that the Long Island Bergamot and the Church were one and the same variety, it would not surprise me as a *wonder*, nor as a *lusus naturæ*. It seems rather surprising that some seedlings differ *so widely* from their parents. I can show, in thousands of mine, the offsprings of a carefully noted pedigree.

Truly yours, L. E. Berckmans, *Plainfield, N. J.*

Hollidaysburg, Pa., August 5, 1857.

Editor of Horticulturist.—Dear Sir: The *first* horticultural exhibition ever held in this county, came on the 31st ult., and I take great pleasure in communicating to you that it was successful entirely beyond the anticipations of its projectors. The display, for a first effort, and among the mountains, where but little attention has been paid to gardening until within the last two or three years, was fine indeed. I know you cannot afford me the room to particularize, and I will merely mention that, as the *first best* thing we could offer to a cultivator of flowers, we proposed the *Horticulturist* for a year, for the best display of pot plants, and that it was awarded to Mrs. Lloyd Knight, our Lutheran pastor's wife. Second premium for pot plants to Mrs. Daniel Bolinger. First premium for cut flowers (Buist's *Flower Garden Directory*) to Miss Anna Baker. Second premium for cut flowers (*American Florist's Guide*) to Mrs. Jas. A. McCahan. Complimentary notice was taken of contributions of pot plants and cut flowers, by Mrs. Thad. Banks, Mrs. J. Penn Jones, Mrs. A. F. Osterloh, Mrs. O. A. Traugh, and quite a number of others. The contributions of fruit and vegetables were not so good. The first premium for largest collection of vegetables, was awarded to Mrs. Elias Baker. Second premium to Sheriff Post. The Fruit Committee awarded no premiums.

I will add, only, that the exhibition was a most agreeable and pleasant affair, and that we are so well pleased with it that we mean to have another in the course of a month or six weeks. Yours, &c., ——— ———.

New Rural Periodical.—We understand that a new weekly rural periodical will be issued, under the title of the *Rural World*. It will be profusely illustrated, taking the form of the *Rural New Yorker*, with a large increase of matter, and be published at ONE DOLLAR a year.

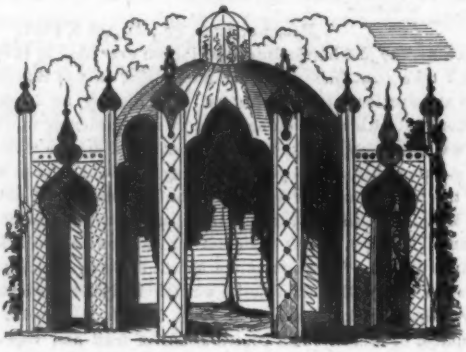
Linnæus Rhubarb.—If any one ever doubted the use of horticulturists, they have only to see what has been done in the matter of rhubarb alone. Freeman & Kendall, of Ravenswood, Long Island, have forwarded us some stalks which it is no exaggeration to say, are more than double the size and weight of what used to be considered highly respectable. They are mammoths, and we are determined to root up all our old stock at once, to grow this new and valuable article. See their advertisement.

Poisoning Mice.—Take one-fourth oz. powdered nux vomica; half pint common boiling peas; simmer them, with as much water as will prevent their burning, for half an hour, and take them off. When any person sows his peas, let him add one-third of the poisoned ones to what he intends to sow, and throw them together into the same drills.

A New Food Bulb.—Mr. Paul Kane, of Toronto, Canada, gives an account of his travels among the Chinook Indians of the northwest coast of America. He states that the only vegetables in use there are the *Camas* and *Wappatoo*—the former, a bulbous root, resembling an onion in outward appearance, but more like the potato when cooked, and very good eat-

ing. The Wappattoo is somewhat similar, but larger, and not so dry or delicate in its flavor. They are found in immense quantities, and have bright, ultramarine blue flowers. What a pity Mr. Paul Kane cannot tell us what they are.

Mr. Editor: I was much pleased with the picture of an aviary you lately promulgated. If birds in confinement only *would not die*, and thus satisfy us they were happy and contented, I should be very apt to keep them by hundreds; but sad experience in losing my pets, has told me to keep only the saucy and hardy in confinement. Parrots are now my hobby, and, after two years' trial, I have not lost one out of twenty. The accompanying parrot-house might very well be combined with a vinery, where, under the shadow of purple grapes, a number of variegated (tulip) parrots might find sufficient room to be saucy and happy. The design is in the Moorish style. Sashes or trellis-work, made to fit accurately, would render it secure in winter. A collection of parrots and paroquets, would have a splendid effect in such a building, and give it a truly Oriental appearance.



Figaro.

Answers to Correspondents.—(A. D.) According to Dr. Gray, the Washington Elm at Cambridge, Mass.—a tree of no extraordinary size—was some years ago estimated to produce a crop of seven millions of leaves, exposing a surface of about five acres of foliage. If, for neatness' sake, or to obtain leaf-mould, you gather this annual harvest of leaves, you will, in time, take away great quantities of mineral as well as organized matter, by which the soil will be impoverished, unless it is restored by manures.

Moles may be killed easily and safely, thus: Take a quantity of fresh earth worms; put them in a wooden box with a small quantity of carbonate of barytes, in powder; lay in the runs five or six worms, and continue doing so as long as the worms are carried away by the moles.

The *Horticulturist*, in 1847, *did* state that Stephanoti's floribunda (a native of Madagascar) will answer well as a summer climber in the open border, if protected in the greenhouse in winter. It is difficult, in this climate, to have it so, though occasionally it will succeed. At the South, it would make one of the handsomest vines possible to possess.

City Trees.—If A. will recollect, he has rarely, if ever, seen a good specimen of an evergreen in the heart of a large city. The air is uncongenial to their growth.

(W. F. Fall.) Your communication, for the reasons assigned, was laid aside, and is now unfortunately lost. When your present season's experience is perfected, we shall be rejoiced to hear from you again on the former and other subjects.

A. J. N. had better apply to a bookseller at once.

(A Subscriber.) It is difficult to keep verbenas over the winter without a greenhouse;

they damp so easily. A sunk pit in the open ground, with a covering of glass or boards, to exclude the rain and frost, if air be admitted occasionally, to dry off the damp, will generally carry them through.

CATALOGUES, ETC., RECEIVED.—California Fruit, painted for the State Agricultural Exhibition, from specimens raised at Smith's Gardens, near Sacramento, by Thomas M. Logan, M. D. A very handsome colored picture, which we have had framed, varnished, and mounted. The fruits are Crawford's late Peach; circumference, twelve inches; weight, near twelve ounces. Smith's Californian Seedling Strawberries: longest diameter, two and two-tenth inches; shortest diameter, one and one-fourth inch. Black Hamburg Grapes: average diameter, eight-tenth inch. Cannon Hall Muscat: average diameter, nine-tenth inch. A superb group, indeed.

Maury's Wind and Current Charts; Gales in the Atlantic. A beautiful quarto of twelve plates, designed to show the relative frequency of gales, during each month, in various parts of the Atlantic Ocean, North and South. A most valuable publication, by which Mr. Maury arrives at the conclusion that the season which presents the most favorable state of the Atlantic for passenger travel, is found to be about the last of July and first of August.

Circular of W. T. Hallett, Architect, Norwich, Conn. Well considered, lucid, and sensible.

Brunel's Mammoth Ship. Description of the Great Eastern Steamship, with engravings. New York: S. D. Drain. 25 cents.

Demands of the Age on Colleges. Speech of Hon. Horace Mann at Cincinnati, Ohio. New York: Fowler & Wells.

How to do Business; a Pocket Manual of Practical Affairs, and Guide to Success in Life. Same publishers.

List of Premiums and Regulations for the Ninth Annual Fair of the Michigan State Agricultural Society, to be held at Detroit, September 29th and 30th, and October 1st and 2d, 1857. A promising and liberal list. J. C. Holmes, Secretary.

Catalogue 1857 and 1858 of Fruit and Ornamental Tree, Flowering Shrubs, &c., cultivated by Wm. Reid, Elizabethtown, N. J. Among much that is valuable, Mr. Reid enumerates the American Holly, which many are now in search of.

Wholesale Price List, Fruit-Trees, &c., cultivated and for sale by the same.

THE NORTHWESTERN FRUIT GROWERS' ASSOCIATION will hold their next session at Alton, Illinois, commencing September 29, and to continue four days. This Association is a most valuable one, and will be attended by the best pomologists of the country. An invitation to attend will be accepted if health permits.

STATE EXHIBITIONS FOR 1857.

Alabama, at Montgomery, October 27 to 30.
Canada East, at Montreal, September 16 to 18.
Canada West, at Brantford, September 29 to October 2.
Connecticut, at Bridgeport, October 13 to 16.
California, at Stockton, September 29 to October 2.
East Tennessee, at Knoxville, October 20 to 23.
Illinois, at Peoria, September 21 to 24.
Indiana, at Indianapolis, October 5 to 10.
Iowa, at Muscatine, October 6 to 9.
Kentucky, at Henderson, October 12 to 16.
Maryland, at Baltimore, October 21 to 25.
Massachusetts, at Boston, October 21 to 24.
Maine, at Bangor, September 29 to October 1.
Michigan, at Detroit, September 29 to October 2.
New Hampshire, at Concord, October 7 to 9.
New Jersey, at New Brunswick, September 29 to Oct. 2.
New York, at Buffalo, October 6 to 9.
Ohio, at Cincinnati, September 15 to 18.
Pennsylvania, September 29 to October 2.
Tennessee, at Nashville, October 12 to 17.
United States Agricultural Society, at Louisville, Ky., September 1 to 6.
Vermont, at Montpelier, September 30 to October 2.
Virginia, October 28 to 31.
Wisconsin, at Janesville, September 29 to October 2.
West Tennessee, at Jackson, October 27 to 30.

The Twenty-Ninth Annual Fair of the American Institute is to be held at the New York Crystal Palace, in the latter part of September. The programme is a liberal one.

The Annual Fair of the Illinois State Agricultural Society will be held at Peoria (Illinois), on the 21st, 22d, 23d, 24th, and 25th of September. Ten thousand dollars are offered in premiums by this most spirited Association, and the objects embraced are very numerous and various.

The Programme of the Tompkins County (N.Y.) Agricultural and Horticultural Society's Exhibition, is an excellent one. The Fair will be held September 23d, 24th, and 25th, at Ithaca.

Ohio Pomological Society.—The eighth session of the Ohio Pomological Society will be held in Cincinnati, commencing on Monday, September 14, &c. (during the week of the State Fair). The meetings of this Society are now held biennially, alternating with those of the American Pomological Society. Those who attend are requested to bring with them specimens of such fruits as are found most valuable in their respective districts of country, and which have not been fully discussed at former meetings; specimens of good peaches and pears are particularly desired at this meeting, and it is hoped that all will come prepared to contribute something to the general stock of knowledge in regard to fruits and fruit culture.

Communications in writing are also solicited on subjects likely to be discussed at the meeting: such as the names and qualities of fruits adapted for different sections of our country, especially such as are found most productive and profitable for market; observations on the diseases of fruits and fruit-trees, and the means of their cure and prevention, including any experiments in the use of lime, plaster, ashes, or other fertilizers for fruit-trees; also, notes on insects injurious to orchards and fruit gardens.

The meeting will be held in the hall of the Cincinnati Horticultural Society. Address the President, at Cincinnati, or the Secretary, at Columbus.

A. H. Ernst, *President;* M. B. Bateham, *Secretary.*

Horticultural Societies.

Pennsylvania Horticultural Society, meeting at Concert Hall, August 18.—This was probably one of the best August exhibitions ever held, in some part owing to the favorable season, but, in a great measure, to the increasing taste and spirit of the exhibitors. The plants were never better grown, or in finer condition; but we think the same faces appear too often, and others are a little too common. Thunbergias, scarlet geraniums, Cuphea platycentras, and fuchsias, on other florists' flowers, however well grown or beautiful, are scarcely what we expect to see in a collection of choice greenhouse or stove plants. There were, nevertheless, some rare things amongst them: Plumeiria purpurea, a plant with the appearance and beauty of an Oleander, Medinella magnifica, a new, yellow Echites, called Pellierii, Canna Warczewicsii, amongst others we particularly noted as valuable. We also noted, as a valuable sweet-scented greenhouse plant, a jasminum called Aurantiacum, covered with yellow flowers, which, we presume, is not new, but far less common than it should be. The class of handsome Gloxinias, of which G. Fyfiana is a well known type, has now many representatives. A new one, called Etna, white, with red throat, attracted much attention. Cut specimens of new Gladiolus contained many improvements in these beautiful flowers; we noted "Adonis" as one of the best. Two specimens, in vases, of Thorburn's imported verbena "Imperatrice imperial," were the most beautiful objects in the room. A collection of twenty-four varieties of herbaceous Phlox, by one grower, were much admired; and, in another beautiful collection, we noticed the fine-striped variety Roi Leopold. Baskets of magnificent Balsam flowers, comprised a novel and interesting feature; and the baskets and bouquets were so unusually numerous and beautiful, that even a Paris would have been unable to decide on their merits, and, we believe, the Society voted them all premiums. The Cactus men in the room must have enjoyed a treat in the Cereus triangularis, so seldom seen in flower.

A large shoot of the Lawton Blackberry was exhibited, to show its productiveness; there was probably a quart of berries ripe and unripe on it. Some shoots of the Catawissa Raspberry were also shown in fruit, but the berries were extremely small. Pears were numerous for the season, chiefly of well known kinds, as Bleeker's Meadow, Dearborn's Seedling (unripe), Tyson's, &c. Plums were not numerous; some large specimens of Bolmar's Washington were, however, very attractive.

The vegetables were very superior. We measured some tomatoes over five inches across.

At the July exhibition (an account of which was unintentionally omitted), Mr. Thomas, gr. to J. D. Whetham, had a basket of raspberries said to be a seedling; the fruit was nearly double the size of some Fastolfs from another grower. If this kind sustains its present relative size, it will prove valuable. A fine dish of cherry currants reminded us how slow this really fine variety is coming into cultivation.

It was quite a relief to find one exhibitor employing the leaves of the deciduous cypress in bouquets instead of the arbor-vitæ we see so everlastingly. The various kinds of ornamental grasses are becoming favorite ingredients in successful bouquets.

The annual meeting will be held in Jayne's Hall.

Calendar of Operations.

SEPTEMBER.

THE VINEYARD.

BY R. BUCHANAN, CINCINNATI, OHIO.

By the first week in this month—some years the last week in August—the grapes in this vicinity begin to color; then all danger from *rot* is over. *The crop is made.* Hail-storms may injure it, but nothing else. The work, too, in the vineyard is over, except to tie up straggling or fallen branches.

Some vine-dressers cut off the ends of the branches above the tops of the stakes, to make the grapes ripen better; but this is not generally approved, as it is apt to start the fruit-buds for next year to swell prematurely, subjecting them to be injured by hard frosts in winter.

The vintage some years commences the last week in this month, but generally the first week in October, under which month the process of conducting it will be described.

To prepare for the vintage, it will be necessary to have the wine-casks, press, and all vessels requisite, well cleansed and put in perfect order. As much care and neatness should be observed in making wine as in making butter.

N. B.—I regret to say that in all this region about two-thirds of the grape-crop has been cut off by the mildew and rot. Young vines have suffered less than old ones. In Missouri, thus far, the grapes are very fine, and free from disease.

BY WILLIAM SAUNDERS.

Vegetable Garden.—The perfection in celery is to have it well blanched; it is then sweet and crisp. It is sometimes recommended to grow it large and strong previous to blanching; no doubt large stalks will thus be obtained, but at the expense of quality. It must be earthed up and blanched while it is growing; after growth is completed, no amount of covering will whiten it. The main crop of turnips may be sown; sow them thin, and thin out to ten inches apart as soon as they get up. Good turnips cannot be had unless they have ample space to grow in.

Now is the proper time to arrange for next year's cropping. Ground for certain crops should be manured and dug over, unless on very sandy soils, which, we think, derive no benefit from fall digging. For root-crops of all kinds we prefer to manure heavily in the fall, and plough or dig it in. Putrescent manure, applied at the time of sowing seeds of esculent roots—as carrots, beets, &c.—has a tendency to encourage root-fibres near the surface, detrimental to their longitudinal extension and consequent usefulness. Attend also to the rotation of crops, a subject of much importance, and very imperfectly understood. It was at one time thought that chemistry, by acquainting us with the exact requirements of each crop, would enable us to grow the same crop on the same ground for an indefinite period, by annually applying the necessary ingredients, and thus obviate any necessity for rotative cropping. This, however, is not likely soon to be realized.

Strawberries may be planted yet. Prepare the ground by thorough manuring and trenching. If planted in rows, let them be at least three feet apart. Strong growing kinds—as Longworth's Prolific and Boston Pine—should be at least eighteen inches from plant to plant in the rows, and the plants or hills kept distinct. When they are too much crowded, the plants may produce abundance of flower, but no fruit. Select young plants from healthy vines that are in a good bearing condition. Also see to planting a due proportion of staminate along with the pistillate varieties. After planting, spread a mulching of rotted manure between the rows, to keep the soil moist, and protect from frost when it arrives. Spent tan-bark is often useful for this purpose, and may be used as a substitute when it can be obtained. Old plantations should be well thinned out, that the buds for next year's crop may be well developed before the season's growth terminates.

Raspberries.—The old canes that have fruited should be pruned out at once. The young canes should also be thinned out where they are too much crowded. Allow six canes to remain for the present, and next April cut two of them down to within six inches of the root; these will then throw out fruiting branches, which will be a few weeks later in making the fruit, and prolong the fruiting season to that extent.

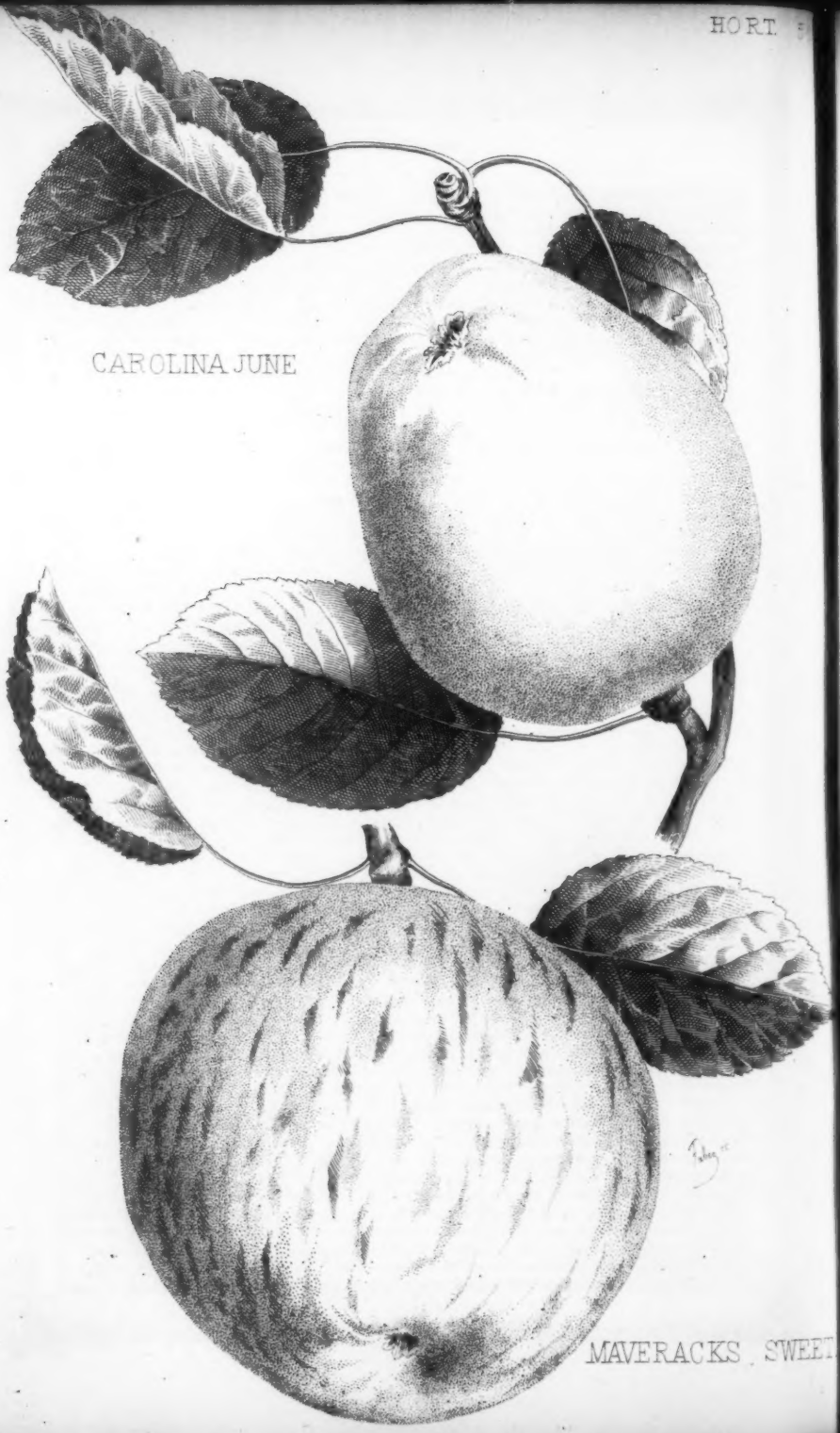
Pears.—To have superior winter fruit on the dwarf trees, give them a thorough soaking of weak guano-water once a week, unless the weather should prove very wet; if so, sprinkle a handful or two of guano over the roots, and cover it by hoeing or slight forking of the soil. Thin the fruit, also, where the crop is heavy. Heavy cropping has tended much to throw discredit on dwarf trees, retarding their growth, and inducing weakness and disease. Prepare for planting by trenching, and see that the compost heap is ample and thoroughly decomposed for use.

Grapery.—Air may now be more freely admitted than at any other period of the year, the better to mature the wood for next crop. Heavy rains should be excluded from the border if the fruit is well ripened. Another cause of badly colored fruit, not previously mentioned, arises from a too rigid summer pruning, checking the growth of the plant and hardening the wood before the fruit has derived sufficient nourishment for proper development. Where this is the case, no treatment now will remedy it.

Greenhouse.—Seedlings of calceolarias, cinnerarias, &c., should be transplanted as early as they can conveniently be handled. Cuttings of most flower-garden plants will form roots readily at this season; but by lifting and potting a few old plants of the different sorts of verbenas, heliotropes, petunias, salvias, &c., and keeping them over winter, they will afford sufficient cuttings to propagate from in the spring. Cuttings rooted then make better and healthier plants, grow more freely, and produce larger flowers; besides the saving of time and labor required in attending to a quantity of young plants in small pots, and the economy of space which they would demand, which can be turned to better account.

Hyacinths and other bulbs should be potted as early as received. Plunge the pots in ashes, sand, or sawdust, covering them a foot deep at least; they will here form a mass of roots with little or no elongation of stem. When taken into the greenhouse (a few at a time), they will flower in a few days after this treatment. Many hardy plants afford bloom in winter, if potted now. Pre-eminent is the Deutzia gracilis; Weigela rosea, spireas, prunifolia pleno, and Reevsii, jasminum nudiflorum, Forsythia viridissima, and small bushes of the Persian lilac, are all well worth potting for early greenhouse flowering. Secure a good stock of monthly flowering carnations. All the greenhouse plants should be gradually hardened, and treated in a manner to perfect their growth. Guard them from wet and excitement at this season, that they may be prepared for the winter.

Pleasure-Ground.—The time has again arrived when alterations of all kinds connected with ground-work are to be effected with the greatest advantage. If improvements are contemplated, the present is the proper time to consider and determine what these shall be. Now is the best time to study the composition of landscape scenery, the individual and collective beauty of trees, as they are clad in the beauty and variety of the "sere and yellow leaf." The garden scenery is constantly changing, however imperceptible it may be; and if this progressive change has extended over several years without interruption, it may now be proper to reflect whether or not time is producing effects that demand immediate attention. Certain trees may have overgrown their intended limits, and be producing effects the opposite to what was intended. Roads and walks which, a few years ago, seemed to have "ample room and verge enough," are now encroached upon so far as to call for immediate alteration, either by removal of the trees or altering the form or direction of the walk; the latter being the most advisable, if at all practicable. No mechanical rules can be permitted to guide us in these and similar matters of taste; yet there are principles which must be adhered to, and which no person of refined and cultivated taste will depart from.


CAROLINA JUNE
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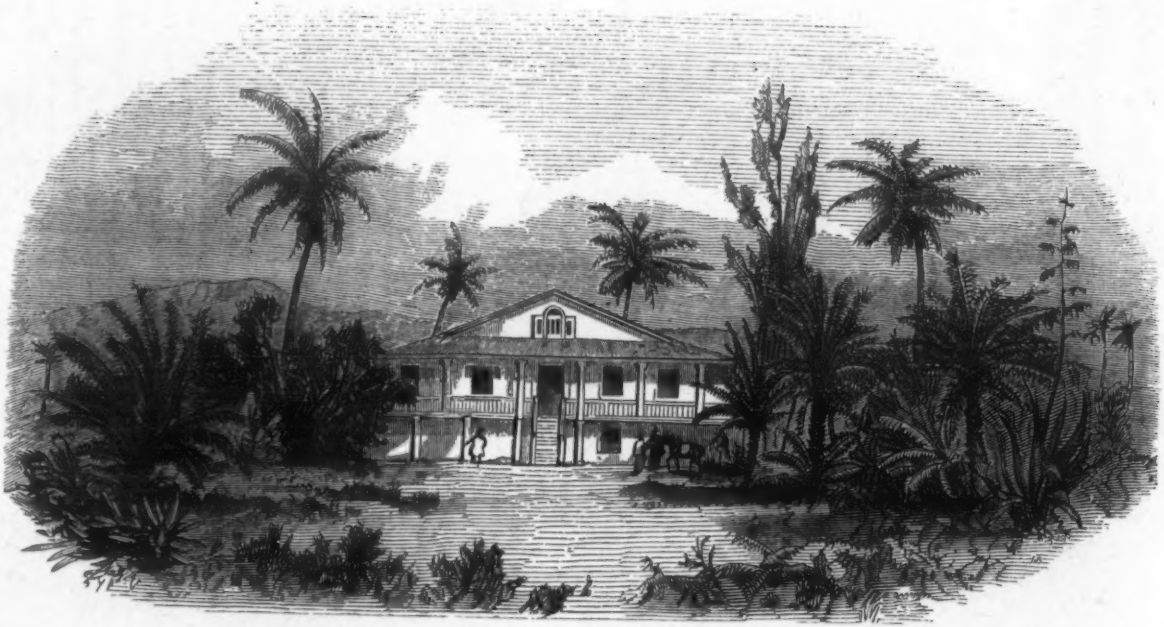

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